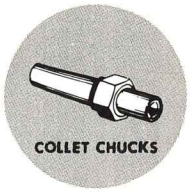
82 Catalog
117

ERICKSON

CATALOG K

PRECISION TOOLS

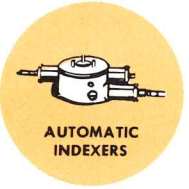

COLLET CHUCKS

HOLDERS

TAP CHUCKS

AIR CHUCKS

EXPANDING MANDRELS


AUTOMATIC INDEXERS

QUICK-CHANGE HOLDER

MASTER SPACERS

EXPANDING COLLET

82/117

ERICKSON TOOL COMPANY • 34350 Solon Road, SOLON, OHIO (GREATER CLEVELAND)

Machine Tool Show, May 1st, 1958
Philadelphia, Pa
F.S.H.

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COLLET CHUCKS model '01 3
Recommended use: Drill presses—lathes—automatic lathes—automatic screw machines—grinders—gear shavers—portable hand tools—borematics—tapping machines—checking fixtures • Dimensions

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COLLET CHUCKS model '09 5
Recommended use: Turret lathes—engine lathes—milling machines—automatic screw machines—gear shavers and hobbers—fixture chucks—or where reduced overhang and increased strength and rigidity are desirable.
Dimensions

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AIR OPERATED CHUCKS 19
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Dimensions

APPLICATIONS OF AIR CYLINDERS 20

AIR OPERATED CHUCKS—R TYPE 21
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PREFACE

The Erickson line of products was developed to help overcome several inadequacies in present day machine tool operation in the metal working field.

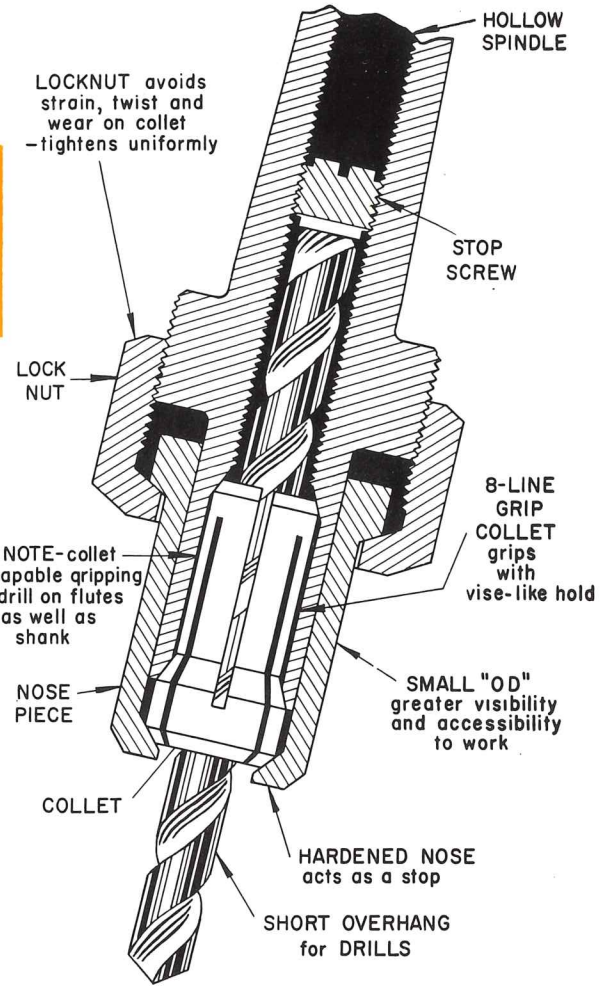
With few exceptions all products shown on the following pages are standard items and, as such, are shown in general use as accepted by industry for universal applications. We manufacture a multitude of special applications to suit the individual needs of our customers. It is, of course, impossible to show or list all of these adaptations. We ask you to keep in mind, as you examine the various Erickson products, that if the solution to your particular problem is not listed, it can be supplied by Erickson's Research and Engineering Service.

COLLET CHUCKS
...model '01

- Delivers guaranteed accuracy of .0005" T.I.R.
- Permits collet to collapse over a range of 1/32".
- Replaces seven standard single purpose collets.
- Grips drills on flutes, permits stubbing and use of broken drills.
- Permits greater feeds and speeds.
- Increases tool life.
- Reduces set-up time.
- Collets are interchangeable in all types of chucks of same series.
- Accuracy is maintained with wear because mating surfaces of shank and collet wear to continuous gauge fit.

RECOMMENDED FOR USE ON:

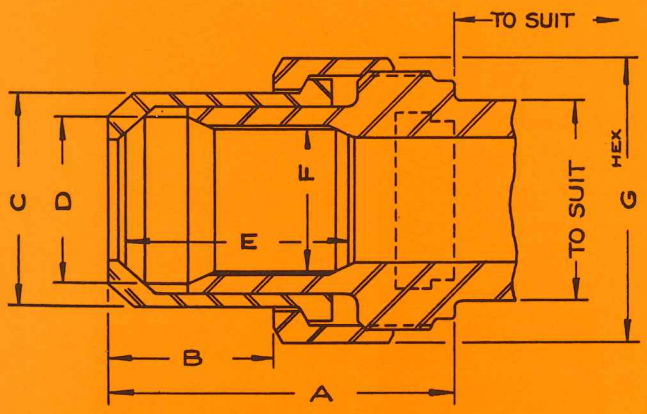
Drill Presses • Lathes • Automatic Lathes • Automatic Screw Machines • Internal and External Grinders • Gear Shavers • Portable Hand Tools • Borematics • Tapping Machines • Checking Fixtures • Other Precision Holding Applications


HOLLOW SPINDLE
LOCKNUT avoids strain, twist and wear on collet –tightens uniformly
STOP SCREW
LOCK NUT
8-LINE GRIP COLLET grips with vise-like hold
NOTE-collet capable gripping drill on flutes as well as shank
NOSE PIECE
SMALL "OD" greater visibility and accessibility to work
COLLET
HARDENED NOSE acts as a stop
SHORT OVERHANG for DRILLS

AVAILABLE WITH:

Morse, B & S and Jacobs Taper, Straight Shanks — Face Plate and Special Mountings.

Face Plate Mounting also available in '01 models. See Page 7.



Rear oil feed adapters available on all models of straight shank chucks. Prices on application.

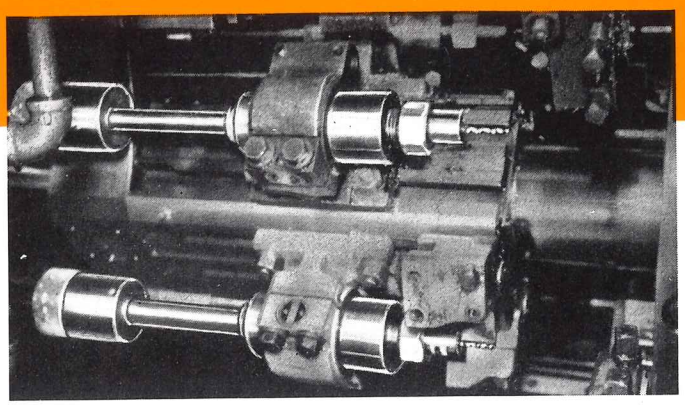
Special collets may be furnished in sizes below range shown or any special size within range. Prices on application.

TABLE OF DIMENSIONS

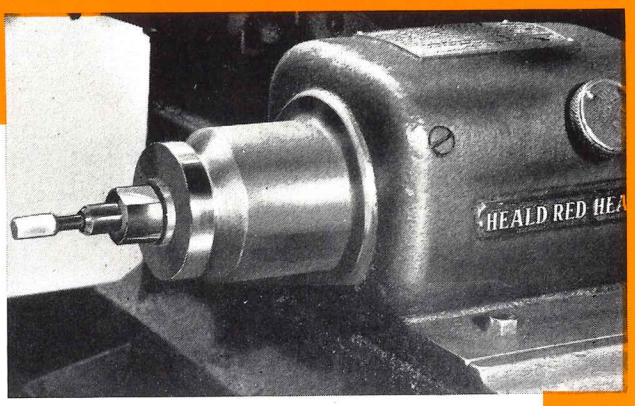
Model	A	B	C	D	E	F	G*	Range
301-IR	1 29/64"	19/32"	.510"	.375"	1"	.300"	3/4"	.250" to .013"
201	2"	29/32"	13/16"	.539"	1 3/16"	.453"	1 1/4"	.375" to .093"
101	2 1/2"	1 15/64"	1 1/16"	.769"	1 7/16"	.654"	1 1/2"	.563" to .218"
181	2 13/32"	63/64"	1 21/64"	1.035"	1 5/8"	.875"	1 3/4"	.750" to .218"
401	3 1/16"	1 21/64"	1 7/8"	1.455"	2"	1.207"	2 1/2"	1.000" to .093"
501	3 19/64"	1 21/64"	2 13/16"	2.255"	2"	1.955"	4 3/8"	1.625" to .218"
601	4 5/64"	1 27/32"	3 7/16"	2.798"	2 1/2"	2.475"	5 1/8"	2.125" to .468"
701	4 57/64"	2 21/64"	4 1/16"	3.309"	2 1/2"	2.975"	6"	2.625" to 1.968"
801	5 29/32"	3 9/64"	6 1/8"	4.844"	3 1/2"	4.468"	8 1/4"	4.000" to 2.468"
901	6 53/64"	3 47/64"	8 1/4"	6.582"	4"	6.240"	10 1/4"	5.750" to 3.843"
10-P1	9 57/64"	4 11/16"	11 15/32"	9.125"	6 1/2"	8.750"	14 3/4"	8.000" to 6.750"

*NOTE: 501 and larger are round with spanner holes.

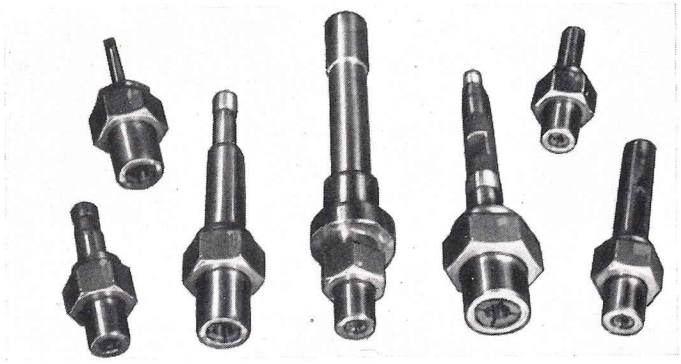
'01 COLLET CHUCK APPLICATIONS



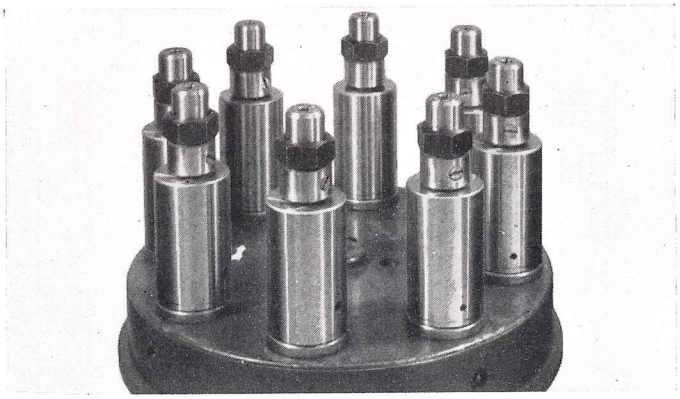
'01 special speeder spindle chucks for automatics



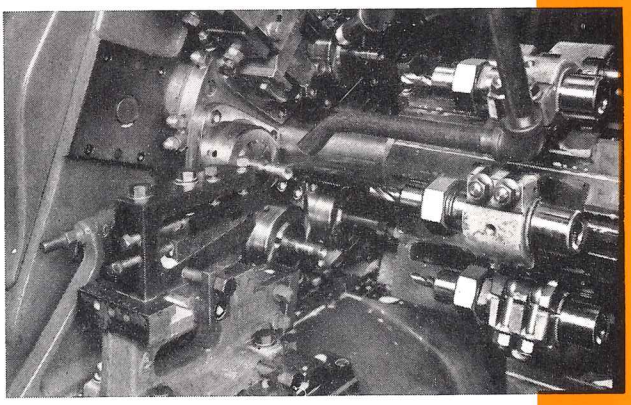
Erickson chuck used on internal grinder spindle



From left to right: (1) 201 special spindle chuck, (2) 101 special taper spindle, (3) 101 special chuck for Heald machine, (4) 201 special spindle, (5) 181 spindle chuck, (6) 201 chuck with collet replacement shank, (7) 201 with automotive shank, (8) 301-IR spindle chuck, (9) 101 chuck with magic shank, (10) 101 with extension and Morse taper, (11) 101 special spindle chuck, (12) 301-IR with Jacobs internal taper

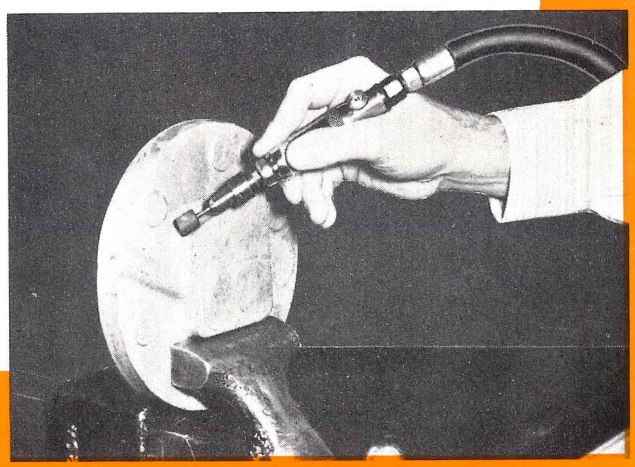


Special power driven collet fixture



'01 chucks on National Acme Automatic

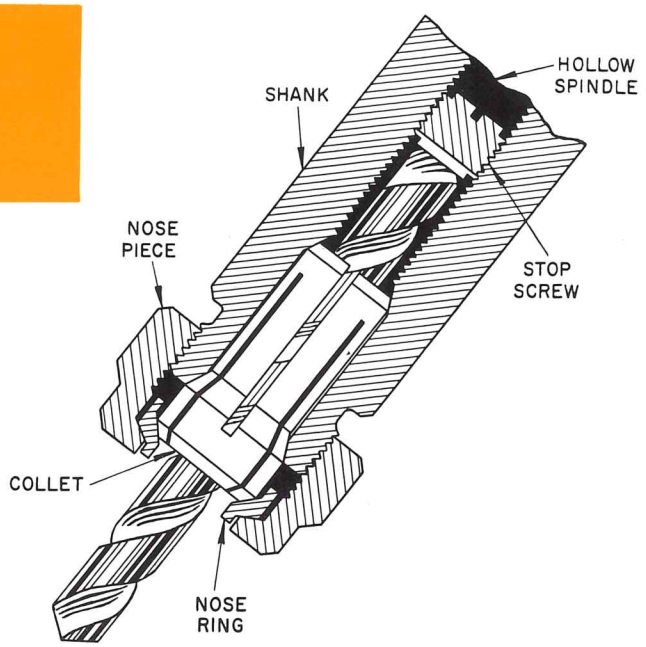
901 Erickson face plate chuck



Erickson chuck used for safe high speeds in Aro hand tool

COLLET CHUCKS
...model '09

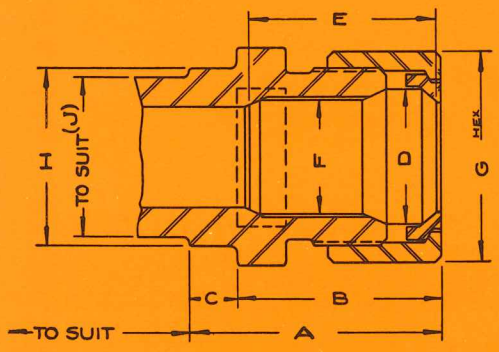
- Delivers guaranteed accuracy of .0005" T.I.R.
- Permits collet to collapse over a range of 1/32".
- Replaces seven standard single purpose collets.
- Grips drills on flutes, permits stubbing and use of broken drills.
- Permits greater feeds and speeds.
- Increases tool life.
- Reduces set-up time.
- Collet collapses along entire length, giving greater grip.
- Collets interchangeable in all types of chucks of same series.
- Accuracy maintained with wear because mating surfaces of shank and collet wear to continuous gauge fit.



RECOMMENDED FOR USE ON:

Turret Lathes • Engine Lathes • Milling Machines • Automatic Screw Machines • Gear Shavers • Hobbers • Other Precision Holding Applications where reduction in overhang and increased strength and rigidity are desirable.

AVAILABLE WITH:
Morse, B & S, and Jacobs Tapers, Straight Shanks, Automotive Shanks—Face Plate and Special Mountings.



Rear oil feed adapters available on all models of straight shank chucks. Prices on application.

Special collets may be furnished in sizes below range shown or any special size within range. Prices on application.

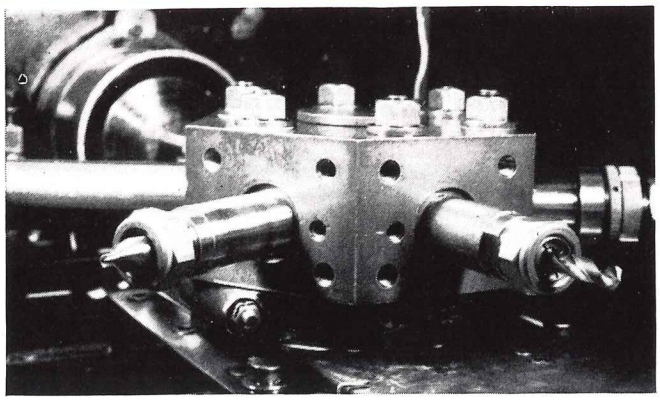
TABLE OF DIMENSIONS

Model	A	B	C	D	E	F	G*	H	J**	Range
309	1 31/64"	1 15/64"	1/4"	.375"	1"	.300"	3/4"	9/16"	1/2"	.250" to .013"
209	1 41/64"	1 13/64"	7/16"	.539"	1 3/16"	.453"	1"	3/4"	3/4"	.375" to .093"
109	2 1/16"	1 1/2"	9/16"	.769"	1 7/16"	.654"	1 1/4"	1"	1"	.563" to .218"
189	2 1/4"	1 19/32"	3/4"	1.035"	1 5/8"	.875"	1 1/2"	1 1/4"	1 1/4"	.750" to .218"
409	2 53/64"	1 59/64"	29/32"	1.455"	2"	1.207"	2 3/8"	1 7/8"	1 3/4"	1.000" to .093"
509	3 11/32"	2 5/16"	1 1/32"	2.255"	2"	1.955"	3 7/8"	2 3/4"	2 1/2"	1.625" to .218"
609	4 9/64"	2 33/64"	1 5/8"	2.798"	2 1/2"	2.475"	4 3/4"	3 1/2"	3 1/4"	2.125" to .468"
709	4 37/64"	2 49/64"	1 13/16"	3.309"	2 1/2"	2.975"	5 1/2"	4 1/4"	4"	2.625" to 1.968"

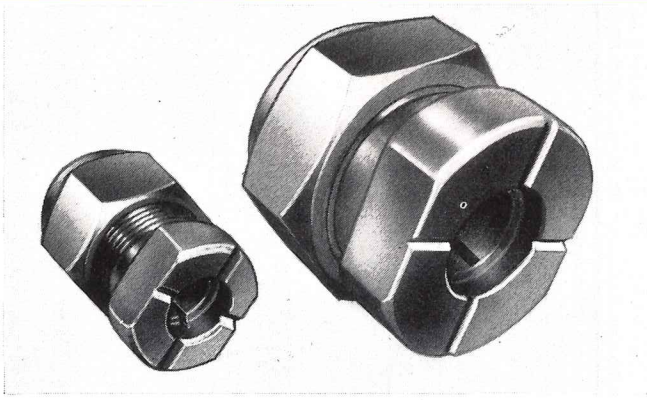
*509 and larger are round with spanner holes.

**When shank diameter is "J" dimension, or larger, then "C" length may be omitted.

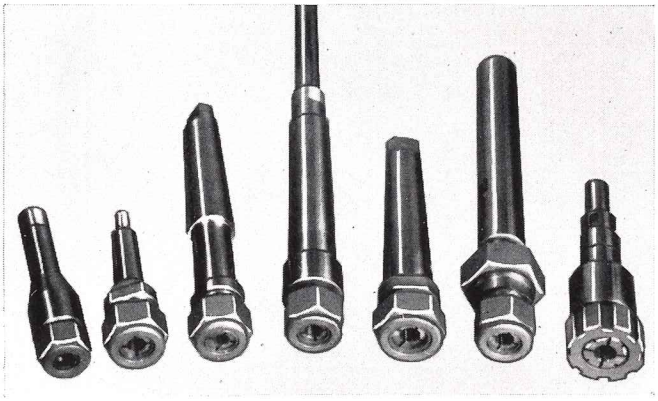
'09 COLLET CHUCK APPLICATIONS



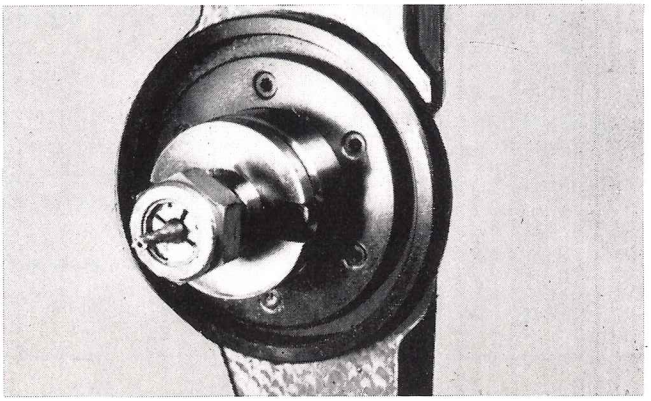
'09 chucks in turret lathe application



189 and 109 drill stop chucks

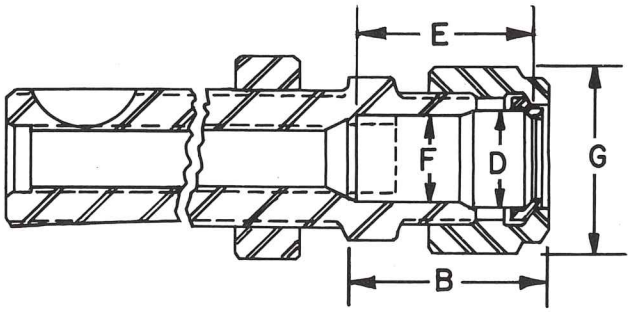


'09 chucks showing standard and special shanks



'09 milling machine chuck

'09 CHUCKS WITH AUTOMOTIVE SHANKS



Automatic Shank	Length	Model	B	D	E	F	G (hex)	Range
1/2-16	3"	309	1 15/64"	.375	1"	.300	3/4"	.250-.013
5/8-16	3"	"	"	"	"	"	"	" "
3/4-12	3"	"	"	"	"	"	"	" "
7/8-12	3 5/8"	"	"	"	"	"	"	" "
1"-12	3 5/8"	"	"	"	"	"	"	" "
1 1/16-12	3 5/8"	"	"	"	"	"	"	" "
1/2-16	3"	209	1 13/64"	.539	1 3/16"	.453	1"	.375-.093
5/8-16	3"	"	"	"	"	"	"	" "
3/4-12	3"	"	"	"	"	"	"	" "
7/8-12	3 5/8"	"	"	"	"	"	"	" "
1"-12	3 5/8"	"	"	"	"	"	"	" "
1 1/16-12	3 5/8"	"	"	"	"	"	"	" "
3/4-12	3"	109	1 1/2"	.769	1 7/16"	.654	1 1/4"	.563-.218
7/8-12	3 5/8"	"	"	"	"	"	"	" "
1"-12	3 5/8"	"	"	"	"	"	"	" "
1 1/16-12	3 5/8"	"	"	"	"	"	"	" "
1 1/4-12	4 5/8"	"	"	"	"	"	"	" "
1 3/8-12	4 5/8"	"	"	"	"	"	"	" "
1"-12	3 5/8"	189	1 19/32"	1.035	1 5/8"	.875	1 1/2"	.750-.218
1 1/16-12	3 5/8"	"	"	"	"	"	"	" "
1 1/4-12	4 5/8"	"	"	"	"	"	"	" "
1 3/8-12	4 5/8"	"	"	"	"	"	"	" "
1 7/8-12	5 5/8"	"	"	"	"	"	"	" "
1 3/8-12	4 5/8"	409	1 59/64"	1.455	2"	1.207	2 3/8"	1.000-.093
1 7/8-12	5 5/8"	"	"	"	"	"	"	" "

FACE PLATE COLLET CHUCKS
...model '09

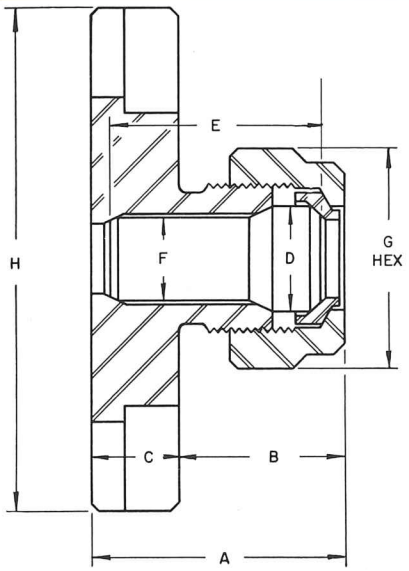


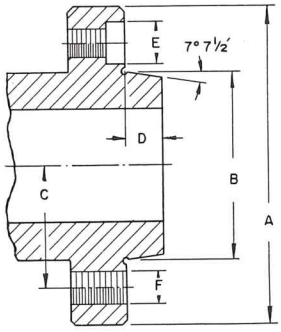
TABLE OF DIMENSIONS

Model	A	B	C	D	E	F	G*	H	No. of Bolts	Size of Bolts	Range
309	1 11/16"	1 3/16"	1/2"	.375"	1"	.300"	3/4"	4"	4	3/8"	.250" to .013"
209	2 3/16"	1 7/16"	3/4"	.539"	1 3/16"	.453"	1"	4"	4	1/2"	.375" to .093"
109	2"	1 1/4"	3/4"	.769"	1 7/16"	.654"	1 1/4"	4"	4	1/2"	.563" to .218"
189	2 3/8"	1 5/8"	3/4"	1.035"	1 5/8"	.875"	1 1/2"	4"	4	1/2"	.750" to .218"
409	2 15/32"	1 23/32"	3/4"	1.455"	2"	1.207"	2 3/8"	4"	4	1/2"	1.000" to .093"
509	3 3/16"	2 3/16"	1"	2.255"	2"	1.955"	3 7/8"	6"	4	1/2"	1.625" to .218"
609	3 11/16"	2 9/16"	1 1/8"	2.798"	2 1/2"	2.475"	4 3/4"	6 1/2"	4	5/8"	2.125" to .468"
709	3 3/8"	2"	1 3/8"	3.309"	2 1/2"	2.975"	5 1/2"	8 1/2"	4	3/4"	2.625" to 1.968"
809	4 5/8"	3 1/2"	1 1/8"	4.844"	3 1/2"	4.468"	6 3/4"	9"	4	3/4"	4.000" to 2.468"
909	5 3/8"	4 1/8"	1 1/4"	6.582"	4"	6.240"	9"	10"	4	5/8"	5.750" to 3.843"
10P9	8 21/32"	6 29/32"	1 3/4"	9.125"	6 1/2"	8.750"	12 3/4"	14 1/4"	8	3/4"	8.000" to 5.750"

*509 and larger are round with spanner holes.

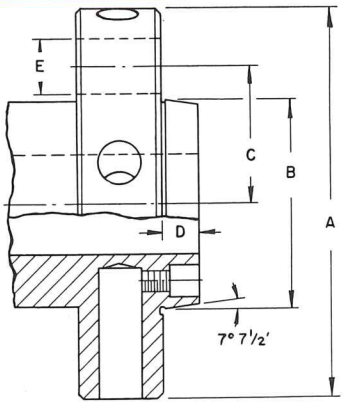
Face Plate mounting also available in '01 models. Drawbar operated collet chucks available for special applications.

A.S.S.N. MOUNTING



Size	A	B	C	D	E
3" nose	3 5/8"	+.00025" 2.1250"	±.006" 1.391"	7/16"	
4" nose	4 1/4"	+.0005" 2.5005"	1 5/8"	−.002" .500"	.5625"
5" nose	5 1/4"	+.0005" 3.2505"	2 1/16"	−.002" .5625"	.625"
6" nose	6 1/2"	+.0005" 4.1880"	2 5/8"	−.002" .625"	.750"
8" nose	8 1/4"	+.0005" 5.50075"	3 3/8"	−.002" .6875"	.9375"
11" nose	11"	+.0005" 7.75075"	4 5/8"	−.002" .750	1.125"
15" nose	15"	+.001" 11.251"	6 1/2"	−.002" .8125"	1.375"

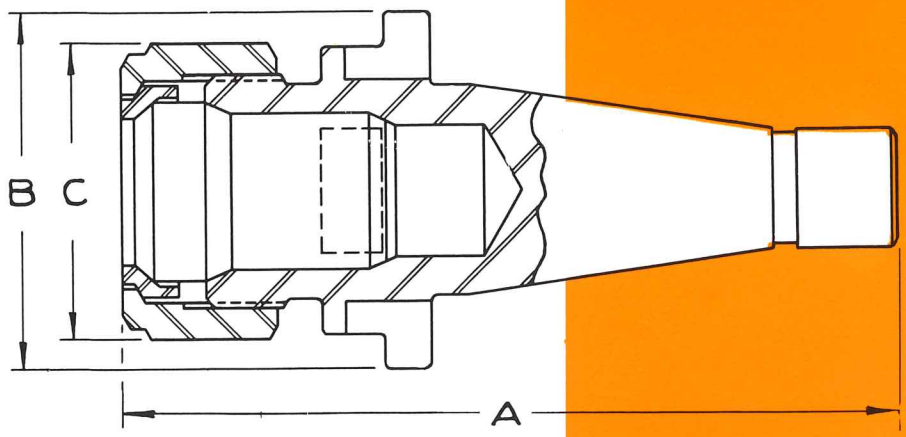
CAM-LOCK TYPE MOUNTING



Size	A	B	C	D	E
3" nose	3 5/8"	+.0005" 2.1255"	+.004" 1.389"	7/16"	+.001" .5937"
4" nose	4 5/8"	+.0005" 2.5005"	+.003" 1 5/8"	7/16"	+.002" .65625"
5" nose	5 3/4"	+.0005" 3.2505"	+.003" 2 1/16"	1/2"	+.002" .78125"
6" nose	7 1/8"	+.0005" 4.1880"	+.003" 2 5/8"	9/16"	+.002" .90625"
8" nose	8 7/8"	+.0005" 5.50075"	+.003" 3 3/8"	5/8"	+.002" 1.03125"

M.M.M.S. Shank on ...model '09 COLLET CHUCKS

The Erickson Collet Chuck ELIMINATES end mill weave ... ELIMINATES using center drill ... GRIPS drills on flutes ... PERMITS stubbing and use of broken drills ... PERMITS use of drills, reamers, and single or double-ended end mills without changing tool holder (often without changing collet) for each collet will collapse a full 1/32".



Model No. 189 W/30 Milling Machine Manufacturer's Standard Taper. Capacity to 3/4".

ELIMINATES END MILL WEAVE

Because the Erickson Collet grips along its entire length the end mill is held firmly and accurately. This makes obsolete solid holders that use set screws which tend to push the end mill off center, causing weave.

ELIMINATES USE OF CENTER DRILL

Because the Erickson Collet grips on flutes, a drill may be stubbed to 2 times its diameter, or less, to become a short, rigid column. This stubbed drill then actually bores a hole, or bushing, in the workpiece. Next, the drill is extended to a predetermined length. The bored hole acts as a guide bushing and maintains accuracy as the hole is drilled to the desired depth.

DRILLS, REAMERS, END MILLS

Drills, reamers, and both single and double-ended end mills may all be used in the same Erickson holder ... often without even changing the collet.

HEAVY DUTY M.M. CHUCK
with Positive Drive

Model G-09 W/50 MMS capacity 15/16".

Dimensions and prices on application.

209

Taper	A	Range .375" to .093" B	C
10	3 3/32"	—	1" Hex.
20	3 19/32"	—	1" Hex.
30	4 15/32"	2 1/4"	1" Hex.
40	5 17/32"	2 7/8"	1" Hex.

109

Taper	A	Range .563" to .218" B	C
20	4 1/32"	—	1 1/4" Hex.
30	4 21/32"	2 1/4"	1 1/4" Hex.
40	5 23/32"	2 7/8"	1 1/4" Hex.
50	7 3/16"	4 3/8"	1 1/4" Hex.

189

Taper	A	Range .750" to .218" B	C
30	4 11/16"	2 1/4"	1 1/2" Hex.
40	5 3/4"	2 7/8"	1 1/2" Hex.
50	7 7/32"	4 3/8"	1 1/2" Hex.

409

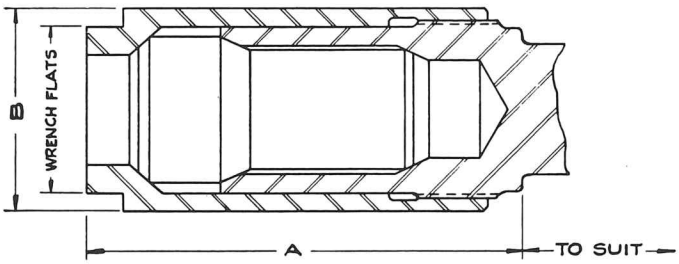
Taper	A	Range 1.000" to .093" B	C
30	5 37/64"	2 1/4"	2 3/8" Hex.
40	6 13/64"	2 7/8"	2 3/8" Hex.
50	7 43/64"	4 3/8"	2 3/8" Hex.
60	10 59/64"	6 3/4"	2 3/8" Hex.

509

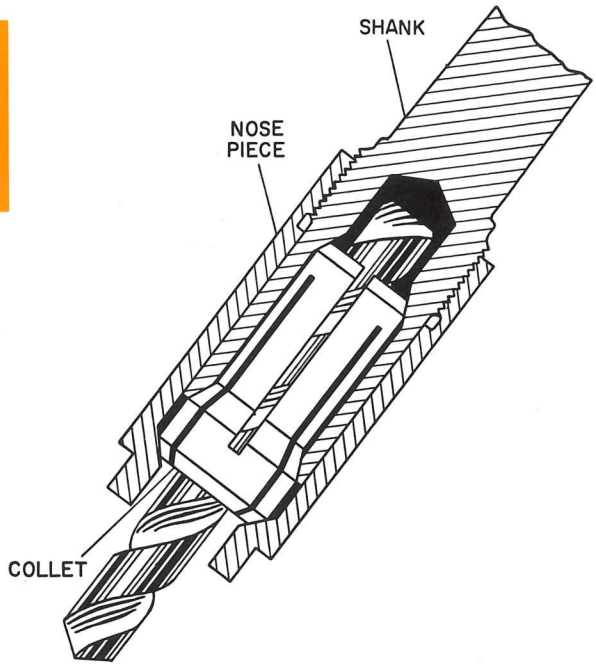
Taper	A	Range 1.625" to .218" B	C
40	6 29/32"	2 7/8"	3 7/8"*
50	8 1/16"	4 3/8"	3 7/8"*
60	11 5/16"	6 3/4"	3 7/8"*

*Round, with spanner holes.

COLLET CHUCKS
...model '03



Model	A	B	Range
303	$2\frac{3}{32}$"	.560"	.250"-.013"
203	$2\frac{3}{16}$"	$\frac{13}{16}$"	.375"-.093"
103	$2\frac{5}{16}$"	$1\frac{1}{16}$"	.563"-.218"
183	$2\frac{1}{2}$"	$1\frac{7}{16}$"	.750"-.218"
403	$3\frac{1}{4}$"	$1\frac{7}{8}$"	1.000"-.093"



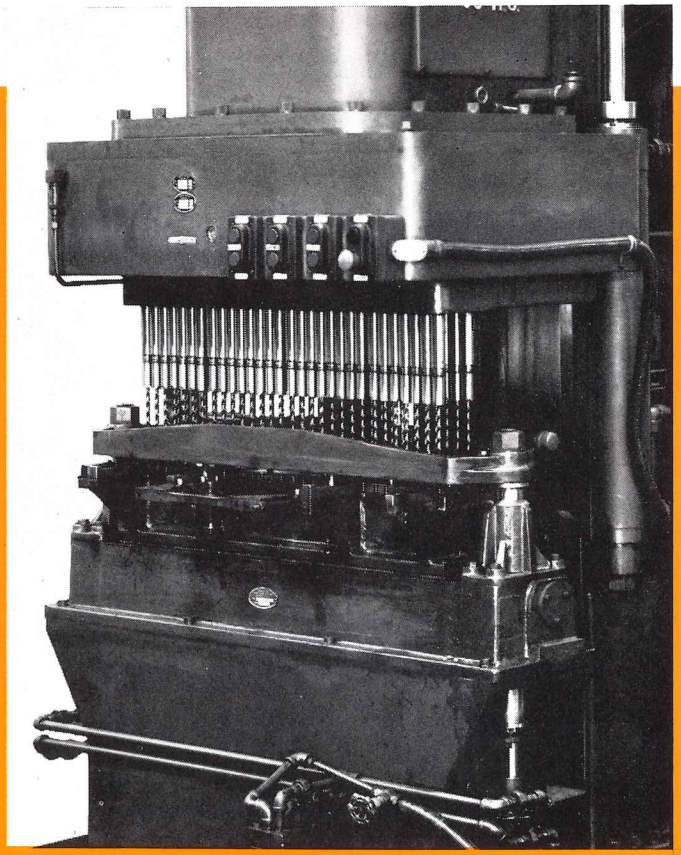
Gripping on flutes eliminates individual spindle adjustment

RECOMMENDED FOR USE ON:

Multiple drill heads and other applications where close center distances are a factor, or small outside chuck diameter is a requisite.

...model '03 APPLICATIONS

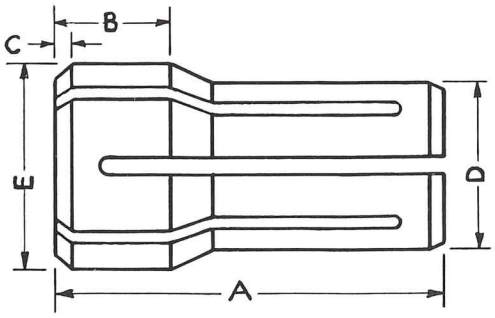
'03 chucks with special mountings



Erickson '03 chucks mounted for multiple drilling

ERICKSON TOOLS CAN BE ADAPTED TO SOLVE YOUR HOLDING PROBLEMS

ERICKSON STANDARD COLLETS



COLLET DIMENSIONS

Model	A	B	C	D	E
300	1″	19/64″	3/64″	.300″	.375″
200	1 3/16″	11/32″	.053″	.453″	.539″
100	1 7/16″	.444″	.049″	.654″	.769″
180	1 5/8″	5/16″	1/16″	.875″	1.035″
400	2″	.551″	.153″	1.207″	1.455″
500	2″	37/64″	.097″	1.955″	2.255″

Model	A	B	C	D	E
600	2 1/2″	43/64″	.222″	2.475″	2.798″
700	2 1/2″	43/64″	.228″	2.975′	3.309″
800	3 1/2″	49/64″	5/16″	4.468″	4.844″
900	4″	3/4″	5/16″	6.240′	6.582″
1000	6 1/2″	1 3/32″	15/32″	8.750′	9.125″
1200	7 1/2″	1 3/8″	19/32″	11.000″	11.406″

ALL COLLETS INTERCHANGE IN CHUCKS OF THE SAME SERIES

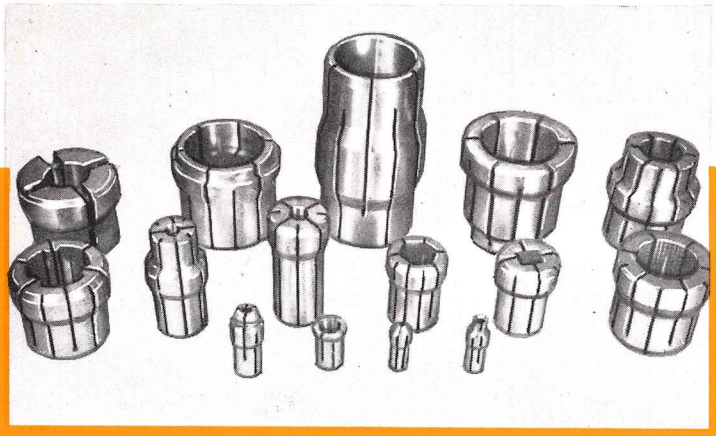
Collets are listed in actual, uncollapsed sizes. Each of the collets collapses over a range of 1/32 inch. For instance, Model 301—1/4 inch collet has a collapsing range from .250 to .219.

Series No.	Used in Model No.	Range	Collet Sizes
300	301-301IR-303-309-329	.047″ to .013″	3/64″
		.093″ to .047″	5/64″ 3/32″
		.250″ to .093″	1/4″ 7/32″ 3/16″ 5/32″ 1/8″
200	201-203-209-229	.375″ to .093″	3/8″ 11/32″ 5/16″ 9/32″ 1/4″ 7/32″ 3/16″ 5/32″ 1/8″
100	101-103-109-129	.563″ to .218″	9/16″ 17/32″ 1/2″ 15/32″ 7/16″ 13/32″ 3/8″ 11/32″ 5/16″ 9/32″ 1/4″
180	181-183-188-189	.750″ to .218″	3/4″ 23/32″ 11/16″ 21/32″ 5/8″ 19/32″ 9/16″ 17/32″ 1/2″ 15/32″ 7/16″ 13/32″ 3/8″ 11/32″ 5/16″ 9/32″ 1/4″
400	401-403-409	1.000″ to .468″	1″ 31/32″ 15/16″ 29/32″ 7/8″ 27/32″ 13/16″ 25/32″ 3/4″ 23/32″ 11/16″ 21/32″ 5/8″ 19/32″ 9/16″ 17/32″ 1/2″
	401-403-409 (special)	.468″ to .093″	15/32″ to 1/8″ in increments of 1/32″
500	501-509	1.625″ to .968″	1 5/8″ 1 19/32″ 1 9/16″ 1 17/32″ 1 1/2″ 1 15/32″ 1 7/16″ 1 13/32″ 1 3/8″ 1 11/32″ 1 5/16″ 1 9/32″ 1 1/4″ 1 7/32″ 1 3/16″ 1 5/32″ 1 1/8″ 1 3/32″ 1 1/16″ 1 1/32″ 1″
	501-509 (special)	.968″ to .468″	31/32″ to 1/2″ in increments of 1/32″
	501-509 (special)	.468″ to .218″	15/32″ to 1/4″ in increments of 1/32″
600	601-609	2.125″ to 1.468″	2 1/8″ 2 3/32″ 2 1/16″ 2 1/32″ 2″ 1 31/32″ 1 15/16″ 1 29/32″ 1 7/8″ 1 27/32″ 1 13/16″ 1 25/32″ 1 3/4″ 1 23/32″ 1 11/16″ 1 21/32″ 1 5/8″ 1 19/32″ 1 9/16″ 1 17/32″ 1 1/2″
	601-609 (special)	1.468″ to .968″	1 15/32″ to 1″ in increments of 1/32″
	601-609 (special)	.968″ to .468″	31/32″ to 1/2″ in increments of 1/32″
700	701-709	2.625″ to 1.968″	2 5/8″ 2 19/32″ 2 9/16″ 2 17/32″ 2 1/2″ 2 15/32″ 2 7/16″ 2 13/32″ 2 3/8″ 2 11/32″ 2 5/16″ 2 9/32″ 2 1/4″ 2 7/32″ 2 3/16″ 2 5/32″ 2 1/8″ 2 3/32″ 2 1/16″ 2 1/32″ 2″
800	801-809	4.000″ to 2.468″	
900	901-909	5.750″ to 3.843″	
1000	1001-1009	8.000″ to 5.718″	
1200	1201-1209	10.000″ to 7.718″	

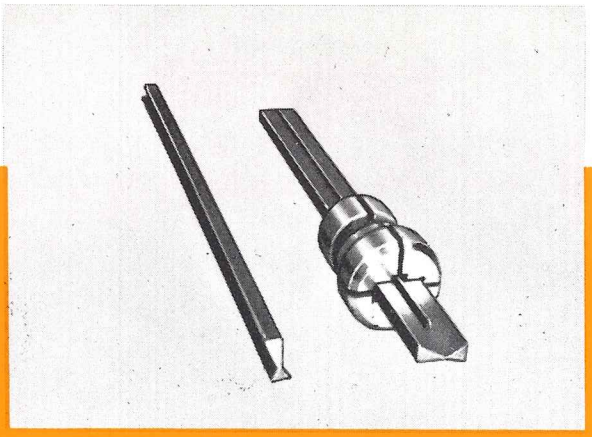
TYPICAL ERICKSON COLLETS

Standard collets interchange in all types of chucks of the same series.

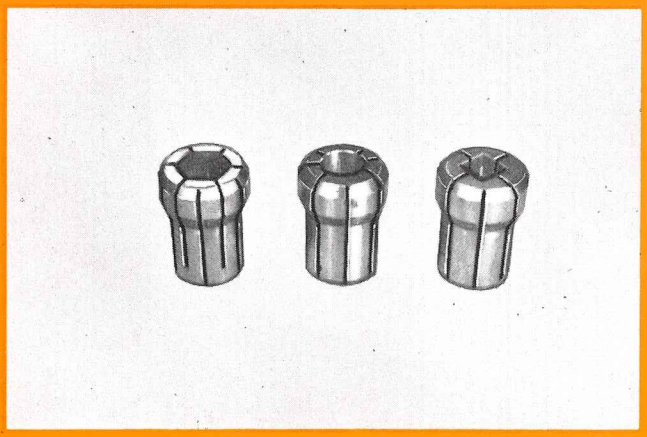
Specially machined collets can be obtained to meet individual holding problems.



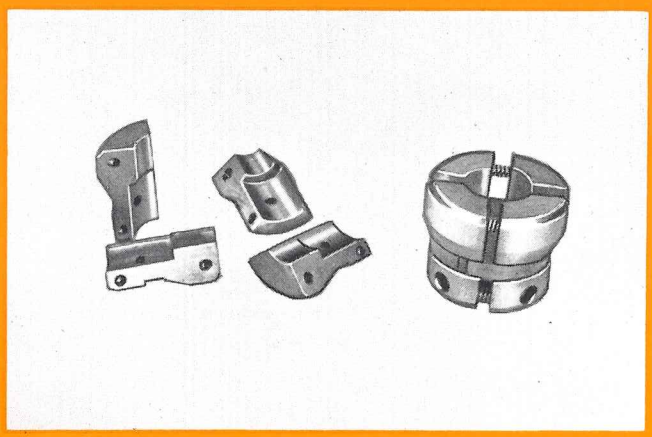
A group of special Erickson collets



Special collet to grip flat drill

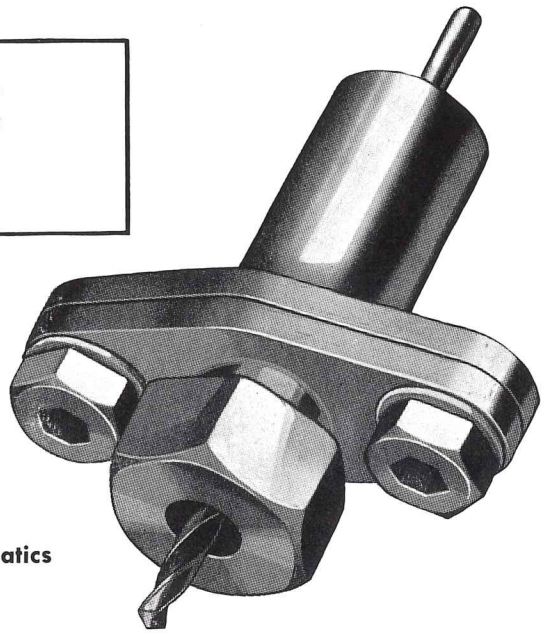


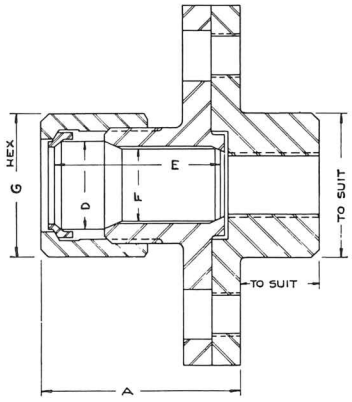
Collets for hexagonal, cylindrical, and square shafts



Segmented collet

ADJUSTABLE FLANGE TYPE HOLDERS





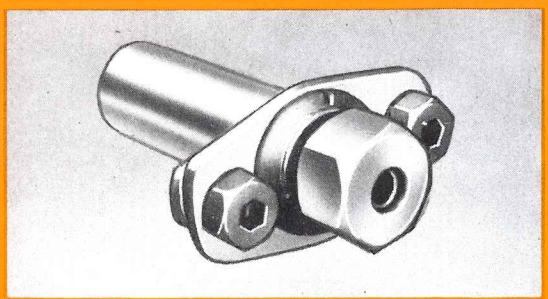
RECOMMENDED USE:
Brown & Sharpe Type Automatics and Turret Lathes

- Can be set into smaller work space.
- Collet collapses over range of 1/32".
- Grips drills on flutes.
- Permits stubbing.
- Reduces machine inaccuracies.
- Saves set-up time.
- Reduces tool breakage.

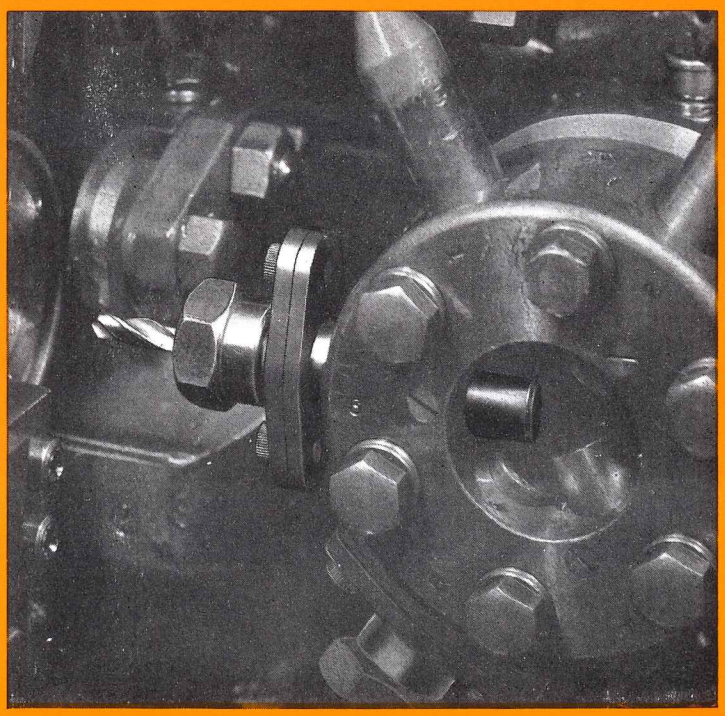
TABLE OF DIMENSIONS

Model	A	B	C	D	E	F	G
329	.817"	2"	7/8"	.375"	1"	.300"	3/4"
229	1 3/64"	2 3/8"	1 1/8"	.539"	1 3/16"	.453"	1"
129	1 23/32"	3 1/8"	1 3/4"	.769"	1 7/16"	.654"	1 1/4"
189	2 9/32"	3 1/8"	1 1/2"	1.035"	1 5/8"	.875"	1 1/2"
409	2 47/64"	4 1/8"	2 3/8"	1.455"	2"	1.207"	2 3/8"
509	3 25/64"	6 5/16"	3 1/2"	2.255"	2"	1.955"	3 7/8"

Gripping drills on flutes permit short overhang



Special adjustable flange type floating holder. Float obtained through action of bonded neoprene insert



Erickson '09 chuck in Brown-Sharpe setup

FULL FLOATING HOLDERS

HOUSING

COMPENSATES FOR *BOTH* ANGULAR AND PARALLEL MISALIGNMENT

MODEL 189 COLLET TYPE

JAM NUT

DRIVER PLATE

BALL RETAINER

SHANK (Collet Body)

SPRING ASSEMBLY

ADJUSTING NUT

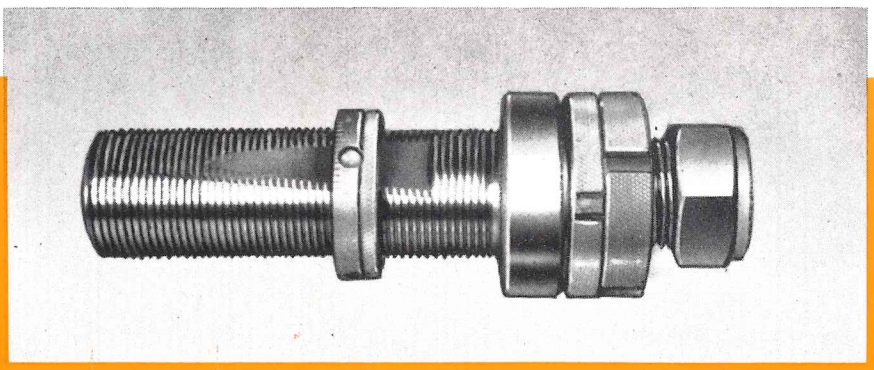
COLLET

NOSE PIECE

In the Full Floating Holder are embodied mechanical principles never before utilized in any floating holder. A unique use of springs in the front of the mechanism allows angular float and gives a counter balance to the holder. This device, in combination with other proven principles, permits the Erickson Full Floating holder to correct both angular and parallel misalignment with the work spindle. It is our opinion that no floating holder can operate properly without compensating for both the angular and parallel misalignment which are present under all machining conditions.

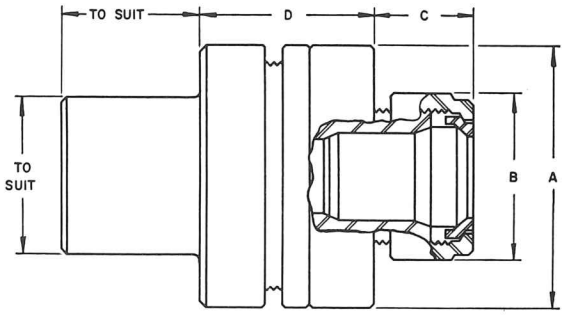
Erickson engineers have given special consideration to the fact that no floating holder can operate both vertically and horizontally and still correct *both* angular and parallel misalignments. The springs give a counter balance to the holder which is particularly important when the tool is in the horizontal position.

When ordering, please specify whether intended use of Full Floating Holder is to be in VERTICAL or HORIZONTAL position, REVOLVING or STATIONARY.



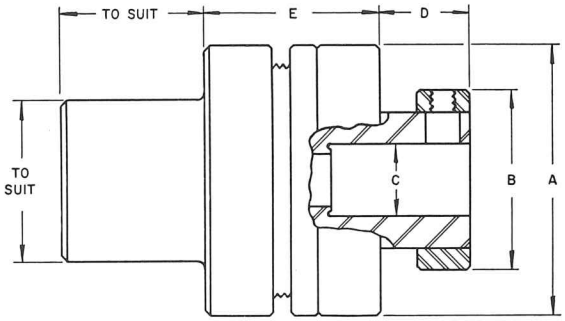
Model 189 Full Floating Holder with automotive shank

SPECIFICATIONS



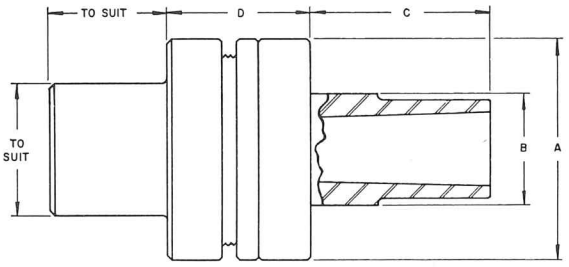
ERICKSON COLLET TYPE

Model	A	B	C	D
209	1 7/8"	1" Hex.	61/64"	1 27/64"
109	2 1/16"	1 1/4" Hex.	1 1/8"	1 29/64"
189	2 3/8"	1 1/2" Hex.	1 1/32"	1 5/8"
409	3 3/4"	2 3/8" Hex.	1 27/64"	2 15/32"
509	4 1/2"	3 7/8" Dia.	1 13/16"	3 5/8"



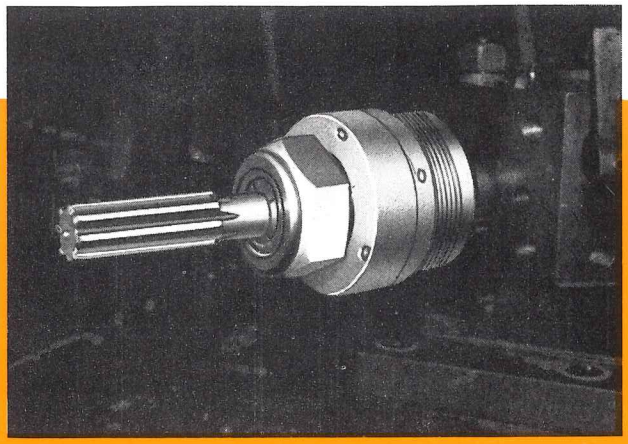
BUSHING TYPE

Model	A	B	C	D	E
209	1 7/8"	1 1/4"	1/2"	5/8"	1 27/64"
109	2 1/16"	1 1/2"	3/4"	5/8"	1 29/64"
189	2 3/8"	1 3/4"	1"	1"	1 5/8"
409	3 3/4"	1 7/8"	1"	1 3/16"	2 15/32"
509	4 1/2"	2 3/8"	1 5/8"	13/16"	3 5/8"

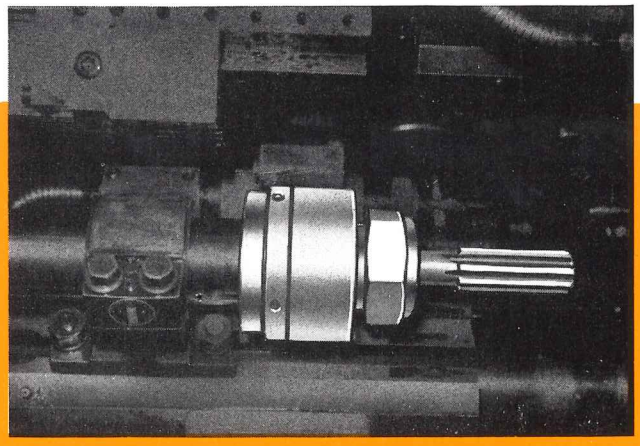


MORSE TAPER TYPE

Model	A	B	C	D
209	1 7/8"	3/4"	1 3/4"	1 27/64"
109	2 1/16"	1"	2 1/16"	1 29/64"
189	2 3/8"	1 1/4"	2 23/32"	1 5/8"
409	3 3/4"	1 7/8"	3 1/16"	2 15/32"
509	4 1/2"	2 1/2"	3 15/16"	3 5/8"



409 Full Floating Holder on hex turret



409 Full Floating Holder on automatic

TAP CHUCKS...model '01

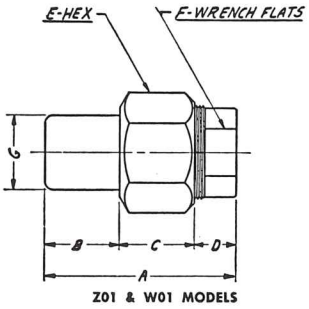
The Precision Tap Chuck, with all of the accuracy of the Erickson Collet Chuck, is ideal for extremely close tolerance tapping operations and for those which require a positive grip on the tap.

Precision Tap Chucks come in four models. With them, if proper alignment is maintained, Class 1, 2, 3 and 4 thread fits can be produced. An exploded view of the Tap Chuck is shown. The driver, which assures positive drive, cannot interfere in any way with the close tolerance required. Shanks are adaptable to all spindles. Because of the "accuracy-of-concentricity" delivered, taps cut more evenly on all flutes, thus lengthening tap life and increasing feed speeds.

MODEL S01

MODEL Z01

Body Driver Collet Nose Piece Nut

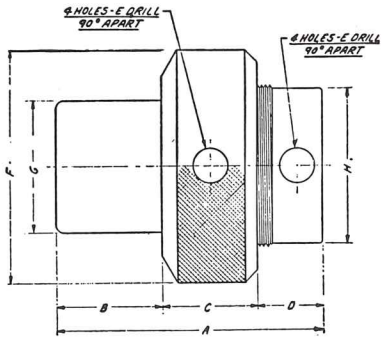


Z01 & W01 MODELS

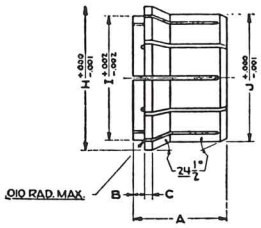
CHUCK OUTLINE DIMENSIONS

Model	A	B	C	D	E	F	G
Z01	2 3/64"	47/64"	7/8"	7/16"	1 1/8"	3/4"	13/16"
W01	3"	1 21/64"	1 1/16"	39/64"	1 7/8"	1 1/4"	1 7/16"

Model	A	B	C	D	E	F	G	H
U01	4 19/64"	1 23/32"	1 17/32"	1 3/64"	9/16"	3 3/4"	2 3/16"	2 1/2"
S01	4 59/64"	1 29/32"	1 5/8"	1 25/64"	41/64"	4 1/2"	2 13/16"	3 1/8"



U01 & S01 MODELS



COLLET DIMENSIONS

Model	A	B	C	H	I	J
Z01	61/64"	—	7/64"	.539"	—	.453"
W01	1 3/16"	3/32"	1/8"	1.107"	.875"	.957"
U01	1 3/8"	3/16"	1/8"	1.813"	1.561"	1.593"
S01	1 1/2"	3/16"	1/8"	2.289"	1.968"	2.032"

Note that Tap Collets are not interchangeable with other Collets.

CHUCK RANGES

Z01 MODEL
Tap Range 0-1/4"

AMERICAN NATIONAL THREAD					
Tap Size	1/4" No. 14	7/32" No. 12	3/16" No. 10	5/32" No. 8	3/32"-1/8"-0-6
Collet Size	.259"	.224"	.198"	.172"	.145"
Driver Square Size	.196"	.171"	.156"	.130"	.115"

W01 MODEL—Tap Range 0-7/8"

AMERICAN NATIONAL THREAD													AMER. NAT. PIPE THD.			
Tap Size	7/8"	3/4"	5/8"	9/16"	3/8"	1/2"	7/16"-5/16"	1/4" No. 14	7/32" No. 12	3/16" No. 10	5/32" No. 8	3/32"-1/8" 0-6	3/8"*	1/2"	1/4"	1/8"
Collet Size	.704"	.594"	.484"	.433"	.384"	.371"	.327"	.259"	.224"	.198"	.172"	.145"	.704"	.692"	.567"	.442"
Driver Square Size	.531"	.453"	.365"	.328"	.291"	.281"	.246"	.196"	.171"	.156"	.130"	.115"	.541"	.525"	.426"	.333"

*Collet for 7/8" Standard Tap can be used.

U01 MODEL—Tap Range 1/2"-1 1/2"

AMERICAN NATIONAL THREAD												AMERICAN NATIONAL PIPE THREAD							
Tap Size	1 1/2"	1 3/8"	1 1/4"	1 1/8"	1"	7/8"	3/4"	5/8"	9/16"	3/8"	1/2"	7/16"-5/16"	1 1/4"	1"	7/8"	3/4"*	5/8"†	3/8"‡	1/2"	1/4"	1/8"
Collet Size	1.237"	1.112"	1.025"	.900"	.804"	.704"	.594"	.484"	.433"	.384"	.371"	.327"	1.316"	1.129"	1.094"	.910"	.8125"	.704"	.692"	.567"	.442"
Driver Square Size	.938"	.844"	.771"	.677"	.605"	.528"	.447"	.365"	.328"	.291"	.281"	.246"	1.000"	.859"	.828"	.684"	.604"	.536"	.520"	.426"	.333"

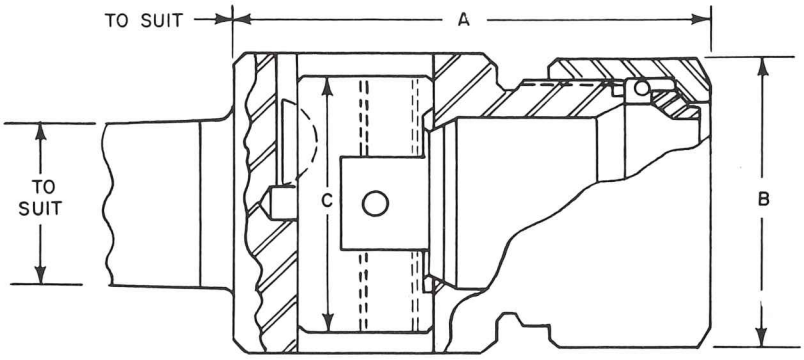
*Driver for 1 1/8" Standard Tap can be used. †Driver for 1" Standard Tap can be used. ‡Collet for 7/8" Standard Tap can be used.

S01 MODEL—Tap Range 3/4"-2"

AMERICAN NATIONAL THREAD												AMERICAN NATIONAL PIPE THREAD							
Tap Size	2"	1 7/8"	1 3/4"	1 5/8"	1 1/2"	1 3/8"	1 1/4"	1 1/8"	1"	7/8"	3/4"	1 3/4"	1 1/2"	1 1/4"	1"	7/8"	3/4"†	5/8"‡	1/2"	3/8"*
Collet Size	1.648"	1.523"	1.434"	1.309"	1.237"	1.112"	1.025"	.900"	.804"	.704"	.594"	1.629"	1.504"	1.316"	1.129"	1.094"	.910"	.8125"	.692"	.704"
Driver Square Size	1.250"	1.156"	1.094"	.984"	.930"	.836"	.771"	.677"	.605"	.528"	.447"	1.234"	1.141"	.989"	.848"	.828"	.684"	.604"	.520"	.536"

*Collet for 7/8" Standard Tap can be used. †Driver for 1 1/8" Standard Tap can be used. ‡Driver for 1" Standard Tap can be used.

TAP CHUCKS...model '09 with Compensating Driver



F09 with No. 2 Morse Taper and Tang (available with other mountings)

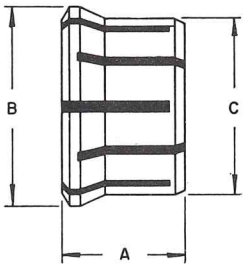
- The compensating driver accommodates all size taps in range.
- Solid holder with reduced overhang.
- Increased gripping power.
- Shanks adaptable to all spindles.

RECOMMENDED USE: For Lead Screw Tapping

Can be supplied in collet type or bushing type

CHUCK OUTLINE DIMENSIONS

Model	A	B	C	Range
E09	1 27/32"	1" Hex.	1 1/4"	American National Thread No. 0 to 1/4"
F09	2 3/8"	1 5/8" Hex.	1 13/16"	American National Thread No. 0 to 7/8"
				American National Pipe Thread 1/8" to 1/2"
G09	3 11/32"	2 3/4" Dia.	2 7/16"	American National Thread 5/16" to 1 1/2"
				American National Pipe Thread 1/8" to 1 1/4"



TAP COLLET

COLLET DIMENSIONS

Model	A	B	C
E09	61/64"	.539"	.453"
F09	1 3/32"	1.107"	.957"
G09	1 3/16"	1.813"	1.593"

CHUCK RANGES

E09 MODEL

Tap Range 0-1/4"

AMERICAN NATIONAL THREAD				
Tap Size	1/4" No. 14	7/32" No. 12	3/16" No. 10	5/32" No. 8	3/32"-1/8"-0-6
Collet Size	.259"	.224"	.198"	.172"	.145"

F09 MODEL—Tap Range 0-7/8"

AMERICAN NATIONAL THREAD													AMER. NAT. PIPE THD.			
Tap Size	7/8"	3/4"	5/8"	9/16"	3/8"	1/2"	7/16"-5/16"	1/4" No. 14	7/32" No. 12	3/16" No. 10	5/32" No. 8	3/32"-1/8" 0-6	3/8"*	1/2"	1/4"	1/8"
Collet Size	.704"	.594"	.484"	.433"	.384"	.371"	.327"	.259"	.224"	.198"	.172"	.145"	.704"	.692"	.567"	.442"

*Collet for 7/8" Standard Tap can be used.

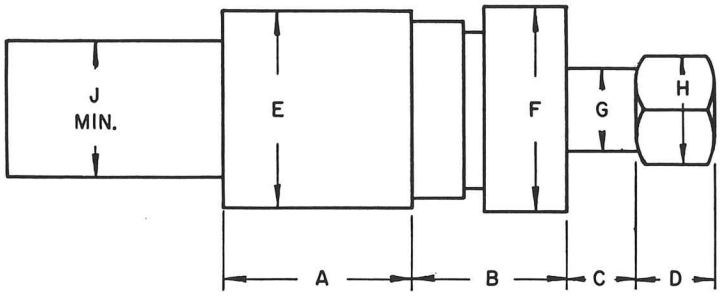
G09 MODEL—Tap Range 1/2"-1 1/2"

AMERICAN NATIONAL THREAD													AMERICAN NATIONAL PIPE THREAD							
Tap Size	1 1/2"	1 3/8"	1 1/4"	1 1/8"	1"	7/8"	3/4"	5/8"	9/16"	3/8"	1/2"	7/16"-5/16"	1 1/4"	1"	7/8"	3/4"	5/8"	3/8"‡	1/2"	1/4"	1/8"
Collet Size	1.237"	1.112"	1.025"	.900"	.804"	.704"	.594"	.484"	.433"	.384"	.371"	.327"	1.316"	1.129"	1.094"	.910"	.8125"	.704"	.692"	.567"	.442"

‡Collet for 7/8" Standard Tap can be used.

Releasing Full Floating Tap Holder...

CAN BE SUPPLIED IN COLLET TYPE OR BUSHING TYPE



Model	A	B	C	D	E	F	G	H	J Min.
E09	1¾″	1 7/16″	⅝″	¾″	1 13/16″	1⅞″	¾″	1″ Hex.	¾″
F09	2⅝″	1 9/16″	1″	⅞″	2 7/16″	2¼″	1⅜″	1⅝″ Hex.	1″
G09	3⅛″	2¾″	1½″	1¼″	3 ⅜″	4½″	2¼″	3½″ Dia.	1½″

See page 16 for table of Collet sizes.

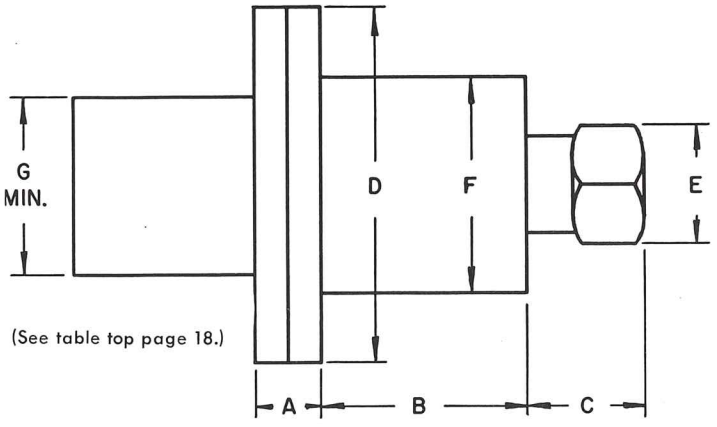
- Compensates automatically for parallel and angular misalignment.
- When spindle is reversed tap will automatically back out of work.
- Can be readily changed for left hand threading.
- The compensating driver accommodates all size taps in range.
- No slippage and no pull-out.

RECOMMENDED USE:

Automatic Lathes • Turret Lathes • Drill Presses • Tapping Machines

Releasing Tap Holder with Adjustable Flanges...

CAN BE SUPPLIED IN COLLET TYPE OR BUSHING TYPE



(See table top page 18.)

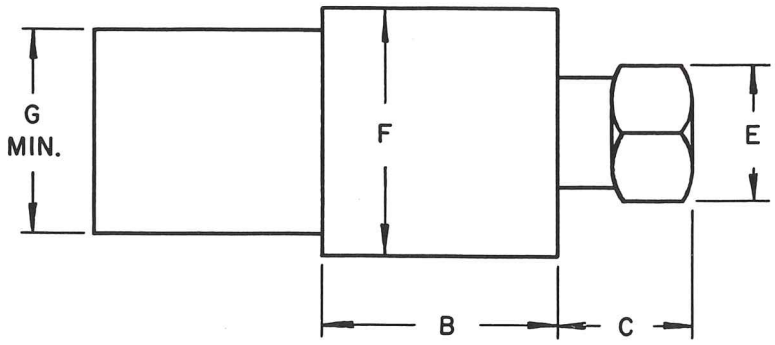
- Flanges allow adjustment for parallel alignment of 1/32″ on a side.
- Has slight float to correct angular and parallel misalignment.
- When spindle is reversed tap will automatically back out of work.
- Can be readily changed for left hand threading.
- The compensating driver accommodates all size taps in range.
- No slippage or pull-out.

RECOMMENDED USE: Turret Lathes

For Dimensions See Releasing Tap Holder Chart on Page 18.

TAP HOLDERS

Releasing Tap Holder...



CAN BE SUPPLIED IN COLLET TYPE OR BUSHING TYPE

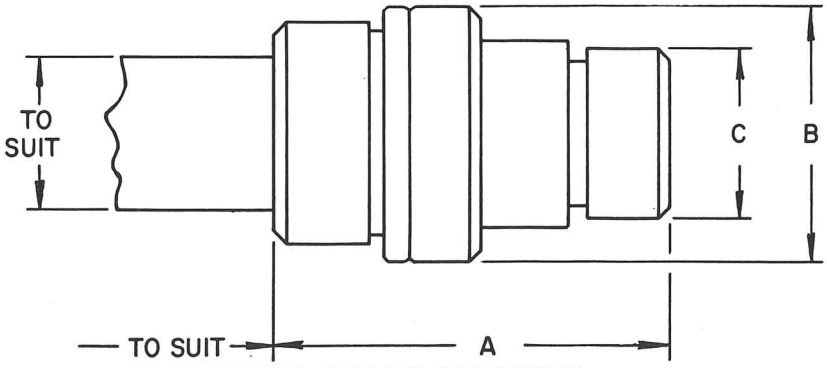
Model	A	B	C	D	E	F	G Min.
E09	9/16"	1 3/4"	1"	3"	1" Hex.	1 13/16"	3/4"
F09	13/16"	2 5/8"	1 1/4"	3 7/8"	1 5/8" Hex.	2 7/16"	1"
G09	13/16"	3 1/8"	1 1/2"	4 1/2"	3 1/2" Dia.	2 3/8"	1 1/2"

See page 16 for table of Collet sizes.

- Where very high speeds are used this type is recommended.
- Slight float for angular and parallel misalignment.
- When spindle is reversed tap will automatically back out of work.
- Can be readily changed for left hand threading.
- The compensating driver accommodates all size taps in range.
- No slippage or pull-out.

RECOMMENDED USE: Automatics

Full Floating Tap Holder...model '09



CAN BE SUPPLIED IN COLLET TYPE OR BUSHING TYPE

CHUCK OUTLINE DIMENSIONS

Model	A	B	C	Range
E09	2 13/16"	1 7/8"	1" Hex.	American National Thread No. 0 to 1/4"
F09	3 7/16"	2 3/8"	1 5/8" Hex.	American National Thread No. 0 to 7/8" American National Pipe Thread 1/8" to 1/2"
G09	5 13/16"	4 1/2"	2 3/4" Dia.	American National Thread 5/16" to 1 1/2" American National Pipe Thread 1/8" to 1 1/4"

See page 16 for table of Collet sizes.

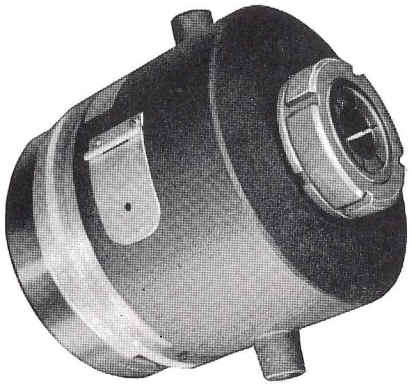
- Compensates for *both* parallel and angular misalignment between spindle and work.
- Embodies same principles as Erickson Full Floating Holder (Page 12).
- Incorporates self compensating driver which accommodates all size taps in range.
- Class 3 fits or better can be produced at production speeds.

RECOMMENDED USE:

Turret Lathes • Automatics and wherever self release is not necessary • Where accurate depth control is desired, Releasing Tap Holders (Pages 16 and 17) are recommended

AIR OPERATED CHUCKS
...models '01 and '09

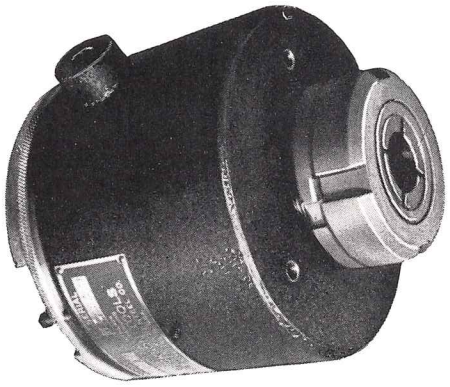
'01 MODEL AIR CHUCK
(LIGHT WORK)



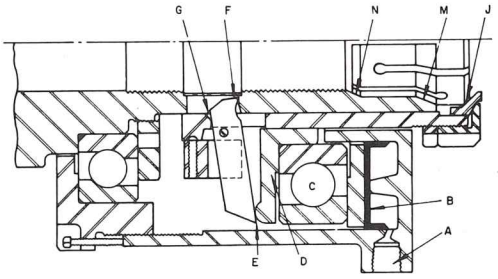
- Quick acting air chuck.
- Delivers a high degree of accuracy.
- Permits quick tool or work change.
- May be operated by hand or foot valve.
- Uses same collet principles as other Erickson collet chucks.

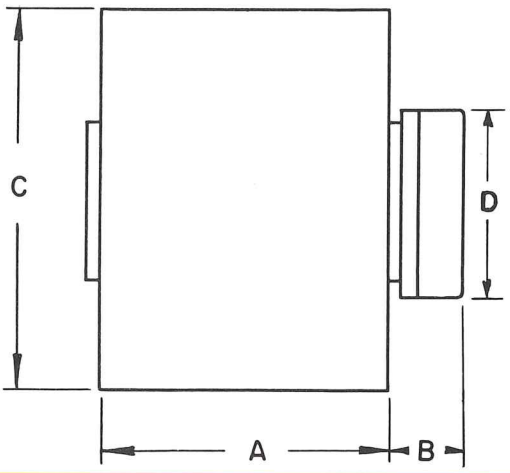
"DONUT" DESIGN PERMITS BAR STOCK TO BE PASSED THROUGH CHUCKS

'09 MODEL AIR CHUCK
(HEAVY WORK)



- Quick acting air chuck with leverage principle.
- Delivers tremendous gripping power.
- Permits application of air chuck holding to wider range of jobs.
- Provides same speed features as '01 models.





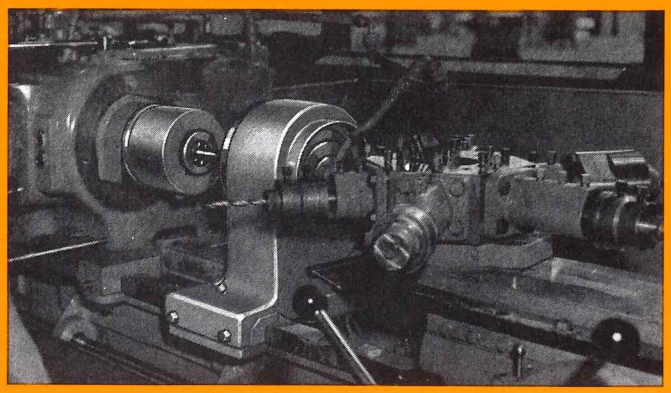
Here is an illustration of how the Erickson Model '09 Type Air Chuck gives 3 to 4 times greater gripping power:

Air enters at A. Piston B moves back, thus transmitting force through radial thrust bearing C. This causes front bearing retainer D to contact levers at E. The lever contacts the shank at F and fulcrum sleeve at G, forcing the fulcrum sleeve back, drawing in collet H at point J, and collapsing collet by means of angle J and two cam surfaces, M and N.

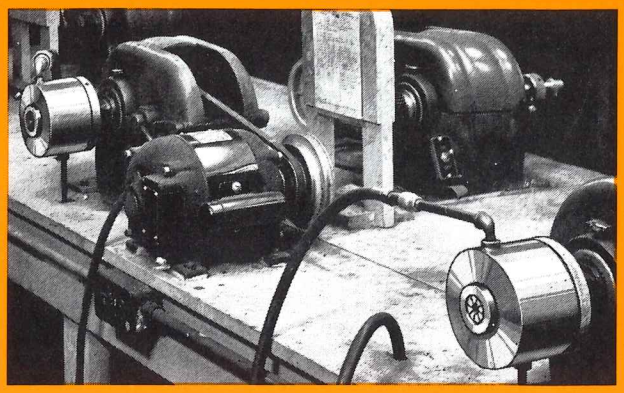
DIMENSIONS

Model No.	A	B	C	D
401 AT	3 1/2"	1 1/32"	4 1/2"	2 3/8"
401 AT-HD	4 1/8"	1 3/32"	6"	2 3/8"
501 AT	4 13/32"	1 3/16"	7"	3 3/4"
601 AT	5 3/4"	1 7/16"	8 5/8"	4 1/4"
409 AT	5 1/4"	1 1/8"	6"	2 3/8"
509 AT	6"	1 1/8"	7"	3 3/4"
609 AT	6 3/4"	1 3/8"	8 1/2"	4 1/4"

AIR CHUCK APPLICATIONS



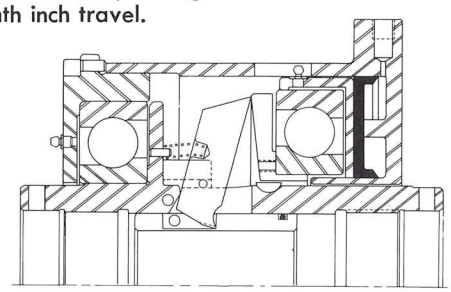
Erickson air chucks used at headstock and steadyrest

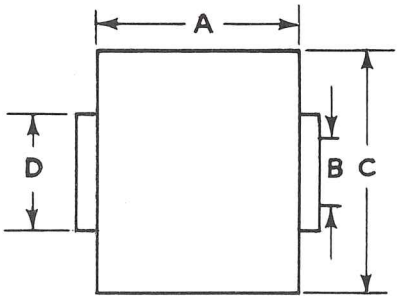


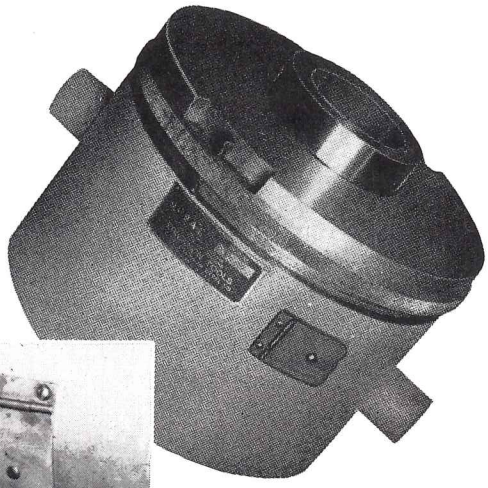
A bank of Erickson air chucks used for finishing operations

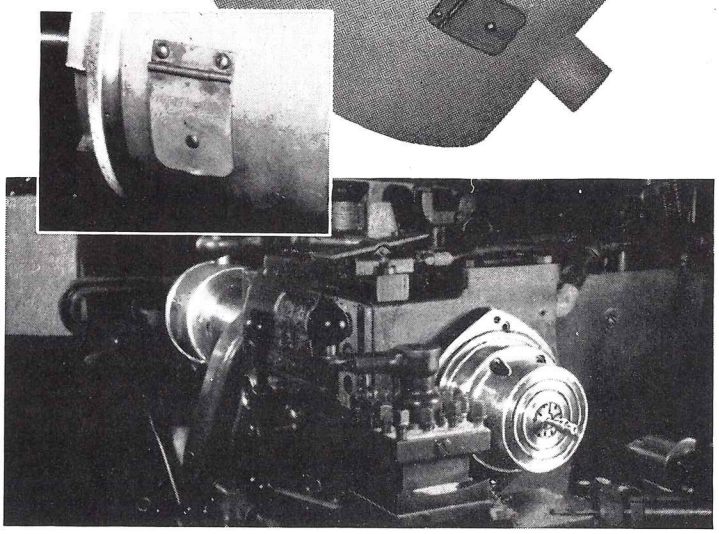
AIR CYLINDER

The outstanding Erickson Air Cylinder uses the mechanical advantage of levers to give 3 to 4 times the drawbar force of conventional air cylinders having the same piston area. The piston of this powerful unit is of the "donut" design which permits bar stock and work to be passed through the air cylinder. It is also ideal for operating collet chucks and expanding mandrels and has a one-eighth inch travel.

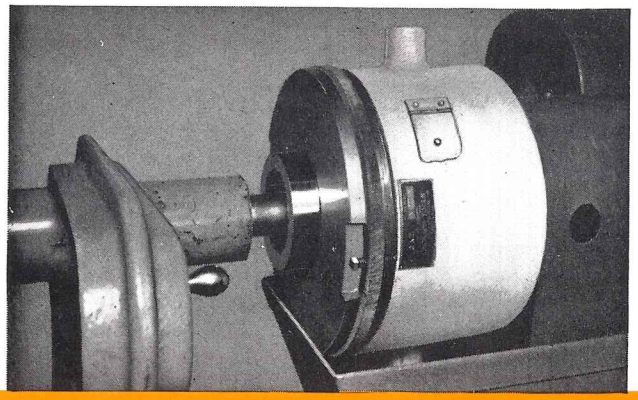








Typical setup of air cylinder actuating work holding collet chuck

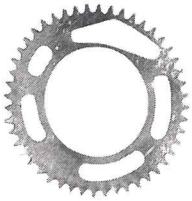


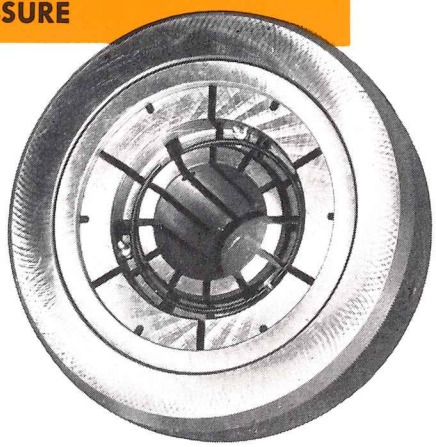
Bar passing through air cylinder

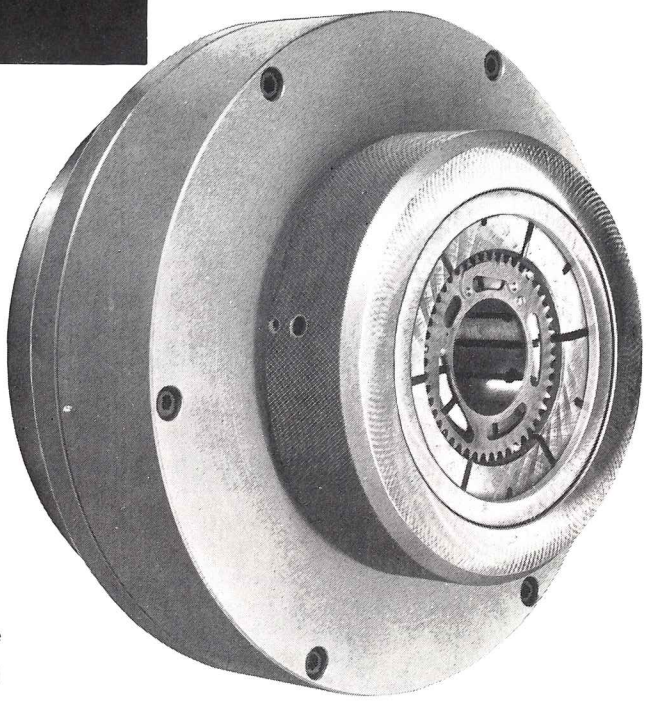
Model No.	A	B (capacity)	C	D
509 AT	6"	1 1/8"	7"	3"
609 AT	6 3/4"	1 5/8"	10 1/4"	3 7/16"
709 AT	6 15/16"	2 1/2"	10 1/4"	4 5/8"

R-TYPE AIR CHUCKS ...models '01 and '09

A QUICK ACTING, COMPACT, SELF CONTAINED UNIT CAN ALSO BE OPERATED BY HYDRAULIC PRESSURE



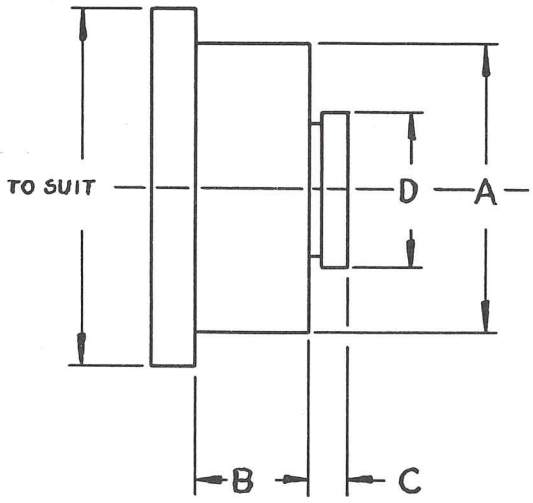




Pictured is special R-type Erickson stationary chuck holding stamped gear within .0005" T.I.R., for I.D. grinding concentric with pitch diameter . . . allows the quick release and loading essential to high production. Housing contains piston which actuates work holding mechanism.

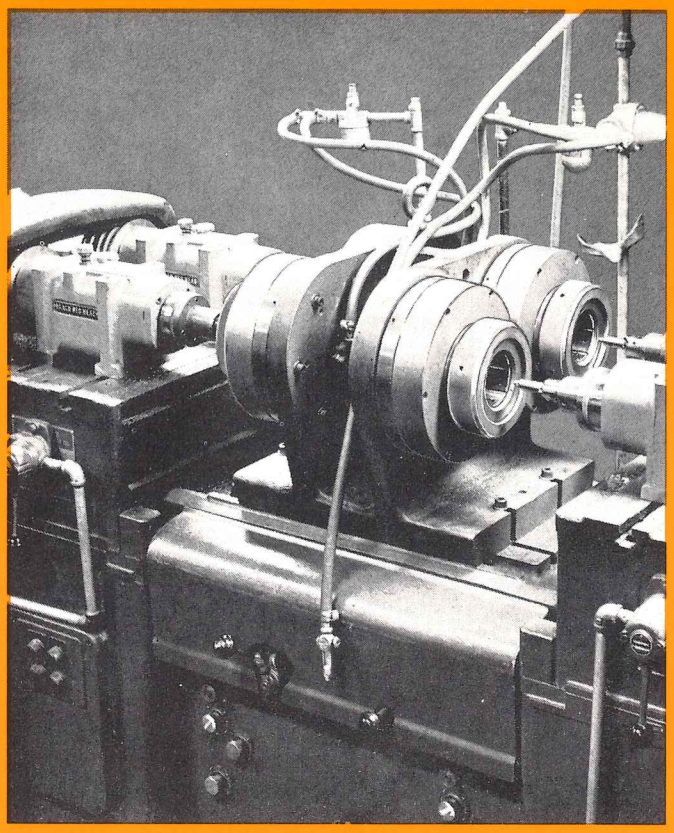
The same principles of the Model '09 and '01 Air Chucks have been incorporated into the R-Type Air Operated work holding fixtures that have been designed to reduce overhang.

This R-Type Unit operates either mandrels or chucks. It is ideal for use on milling machines, turret lathes, boremetics and other production machine tools where minimum overhang and quick chucking is desirable. The ease of operation and production efficiency that it offers can thus be utilized in many places where conventional air chucks could not do the job.

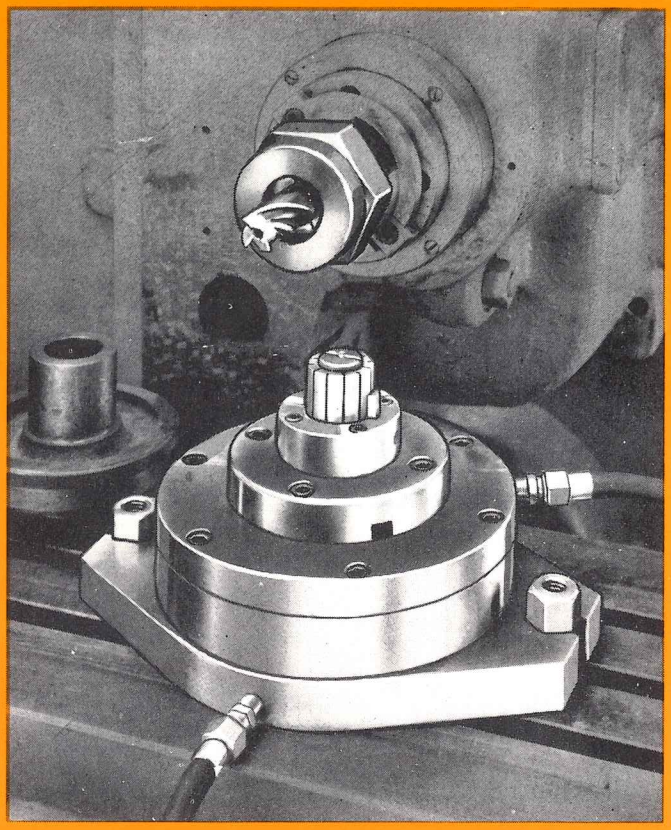


Model	A	B	C	D
401 AT	5½"	2½"	1⅛"	2⅜"
401 AT-HD	6½"	2½"	1⅛"	2⅜"
409 AT	7"	3½"	1 3/16"	2⅜"
501 AT	8"	3"	1½"	3¾"
509 AT	8"	4"	1½"	3¾"
601 AT	9¼"	3⅛"	1½"	4¼"
609 AT	9¼"	4¾"	1½"	4¼"
701 AT	11⅛"	3¾"	2⅜"	5½"
801 AT	13"	3⅞"	2⅝"	7"

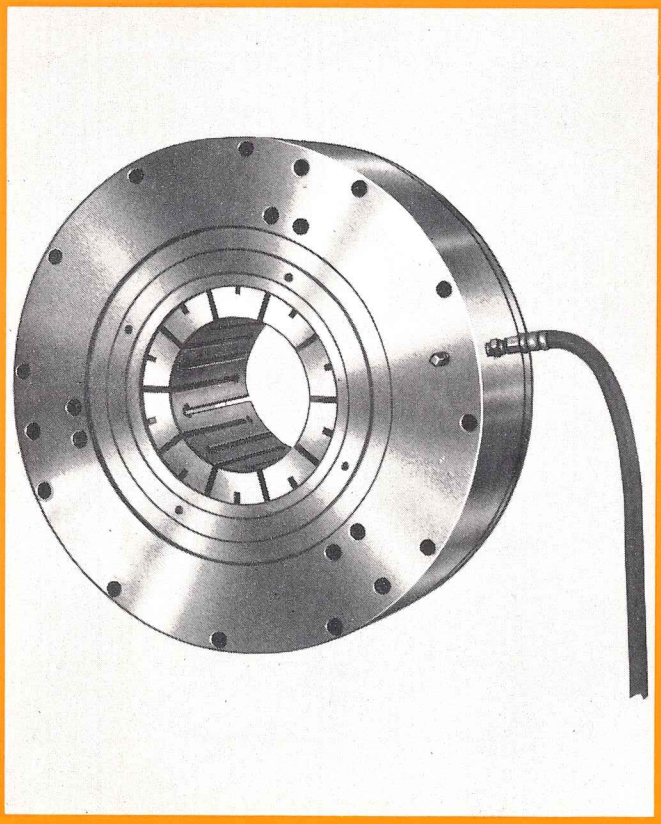
R-TYPE AIR CHUCK APPLICATIONS



4 Erickson R-Type chucks used as holding fixtures on a modern borematic



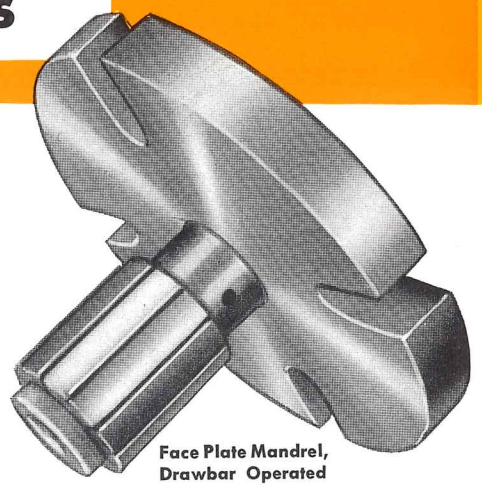
Erickson chuck operating Erickson expanding mandrel on milling machine fixture



R-Type Erickson chuck operated hydraulically

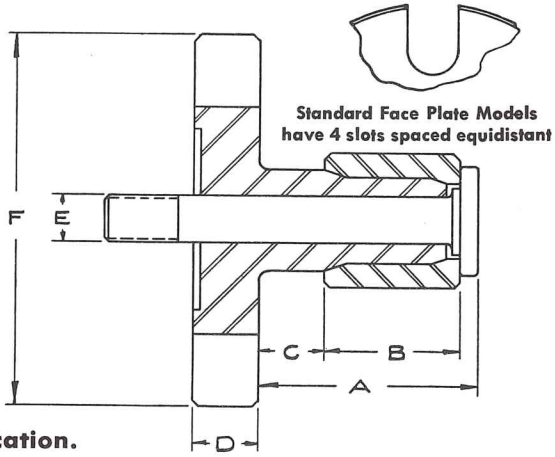
R-Type model with plain face plate mounting used as work holding fixture

PRECISION EXPANDING MANDRELS . . . DRAWBAR Operated Models



Face Plate Mandrel, Drawbar Operated

- For operations on jobs requiring internal chucking where speed and accuracy are necessary.
- Delivers greater holding power because the sleeve grips along its entire length.
- Delivers guaranteed accuracy of .0005″ T.I.R.
- Each sleeve has an expansion range of 1/32″.
- One mandrel accommodates a wide range of sleeves.
- Sleeves are interchangeable on all mandrels of the same series.
- Accuracy is constantly maintained as mating surfaces wear to a continuous gauge fit.
- Self release permits fast loading and unloading.
- Multiple sleeve models are available for work with great length to diameter ratio . . . stop wobble and chatter.
- Sleeves can be specially machined to grip on non-cylindrical or stepped I.D.'s.
- Eliminates need of holding close bore tolerances in work.



Standard Face Plate Models have 4 slots spaced equidistant

Drawbar Operated Mandrels are furnished in all Taper Shanks, Straight Shanks, A.S.S.N. A-1 and A-2, Cam Lock and other Mountings. Special Mountings can be designed to your specifications.

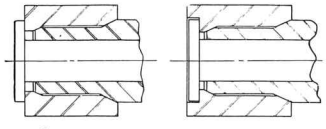
Half length series also available. Dimensions and prices on application.

Model	A	B	C	D	E	F	Standard Sleeve			Flush Sleeve		
							No.	Range	Length	No.	Range	Length
3A	1 15/64″	7/8″	7/32″	1/2″	No. 10-32	4″	A1	1/2″- 5/8″	7/8″	A2	21/32″- 7/8″	1 1/32″
2C	1 19/32″	1 1/16″	3/8″	5/8″	5/16″-24	5″	C1	5/8″- 7/8″	1 1/16″	C2	7/8″-1 1/8″	1 1/4″
1C	1 31/32″	1 1/4″	17/32″	5/8″	3/8″-24	5″	C1	7/8″- 1 1/8″	1 1/4″	C2	1 1/8″-1 9/16″	1 15/32″
18C	2 21/64″	1 1/2″	39/64″	5/8″	7/16″-20	5″	C1	1 1/8″- 1 5/8″	1 1/2″	C2	1 9/16″-2″	1 3/4″
4C	2 29/32″	1 11/16″	31/32″	3/4″	1/2″-20	6″	C1	1 5/8″- 2 1/2″	1 11/16″	C2	2″ -2 7/8″	1 31/32″
5C	3 5/16″	2″	63/64″	3/4″	3/4″-16	6″	C1	2 1/2″- 3″	2″	C2	2 7/8″-3 1/2″	2 11/32″
6C	4 7/32″	2 1/4″	1 17/32″	1″	3/4″-16	7 1/2″	C1	3″ - 3 1/2″	2 1/4″	C2	3 1/2″-4″	2 23/32″
7C	4 41/64″	2 1/2″	1 37/64″	1″	1″ -14	8 1/2″	C1	3 1/2″- 5 1/8″	2 1/2″	C2	4″ -5 5/8″	3 3/32″
8C	5 45/64″	3 1/8″	1 53/64″	1 1/4″	*1 1/2″-12	9″	C1	5 1/8″- 7″	3 1/8″	C2	5 5/8″-7″	3 29/32″
9C	6 23/32″	4″	1 31/32″	1 1/4″	*1 1/2″-12	9 1/4″	C1	7″ -10″	4″	—	—	—
10C	9 59/64″	6 3/4″	2 11/64″	1 3/8″	*1 3/4″-12	12″	C1	10″ -14″	6 3/4″	—	—	—
12C	10 47/64″	7 3/8″	2 15/64″	1 3/8″	*2″ -12	14 3/4″	C1	14″ -18″	7 3/8″	—	—	—

*Internal thread. All mandrels are priced less sleeves. "A" and "C" types are NOT interchangeable.
Any type shank or mounting can be furnished on drawbar operated mandrels. Prices on application.
Larger mandrels of above design available. Prices on application.
Special sleeves for holding on square, hex, splined or other irregular surfaces available. Prices on application.

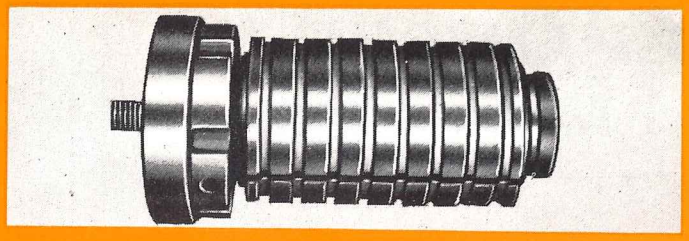
SEGMENTED SLEEVE

- Recommended for jobs where tremendous thrust and radial loads are used.
- Permits multiple sleeve operation on long bores.
- Erickson designed segmented sleeves permit the workpiece to be drawn against a locator, or face, if desired, which gives added support and rigidity.
- Segmented sleeves furnished in same models and same dimension as STANDARD or FLUSH TYPE sleeves listed above.

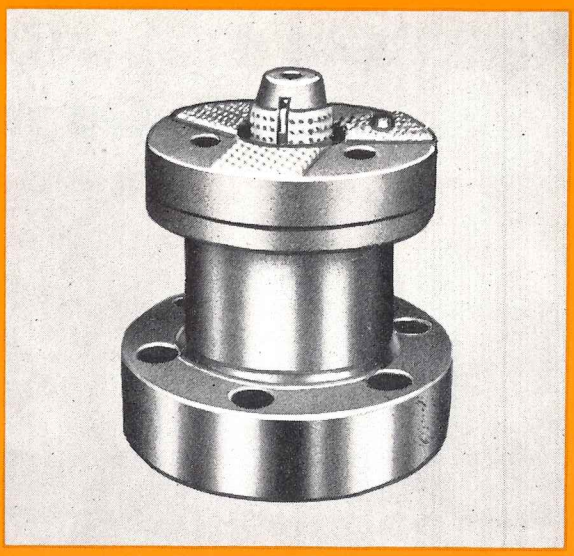


STANDARD TYPE FLUSH TYPE

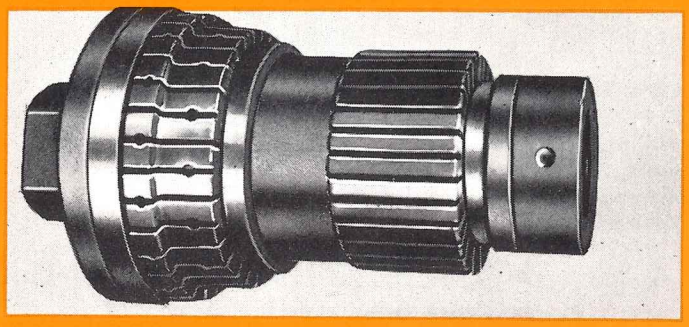
DRAWBAR OPERATED MANDREL APPLICATIONS



Special double, segmented sleeve drawbar mandrel

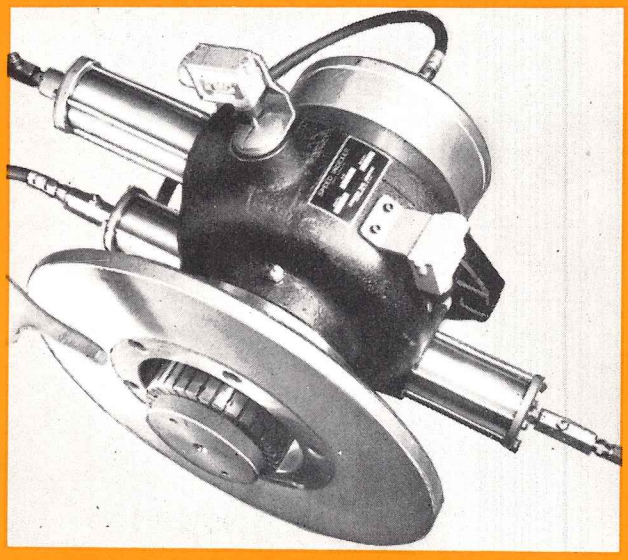


Drawbar operated mandrel with special, serrated locator and sleeve



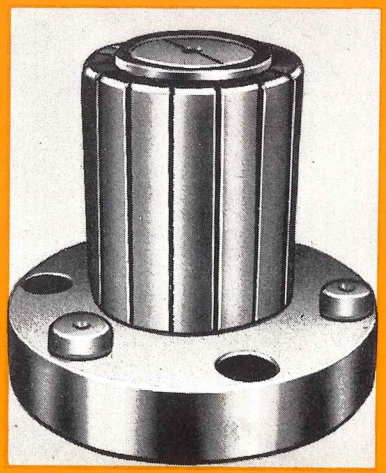
Special drawbar mandrel for holding jet engine part

Drawbar operated mandrel with special locating ring



Drawbar mandrel operated by Erickson Air Cylinder, mounted on Erickson Indexer

Erickson drawbar mandrel with special, stepped segmented sleeve and serrated locating ring



Special, double sleeve drawbar operated mandrel with locating buttons

Self contained, air operated drawbar mandrel

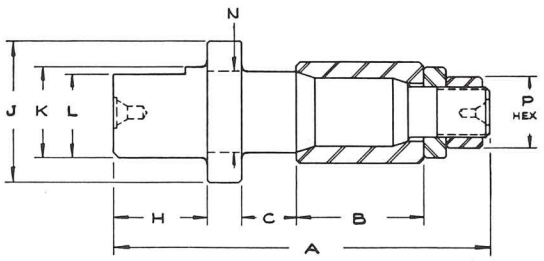
PRECISION EXPANDING MANDRELS ...THREAD Operated Models

◀ Thread operated model shown is for between centers use.

BETWEEN CENTERS TYPE:

- For gripping on interior surfaces—manually operated.
- Delivers guaranteed accuracy of .0005″ T.I.R.
- Each sleeve has an expansion range of 1/32″.
- One mandrel accommodates a wide range of sleeves.
- Delivers greater holding power because the sleeve grips along its entire length.
- Sleeves are interchangeable on all mandrels of the same series.
- Accuracy is constantly maintained as mating surfaces wear to a continuous gauge fit.
- Self release permits fast loading and unloading.
- Multiple sleeve models are available for work with great length to diameter ratio . . . stop wobble and chatter.
- Sleeves can be specially machined to grip on non-cylindrical or stepped I.D.'s.

Thread Operated Mandrels also are furnished in all Taper Shanks, Straight Shanks, A.S.S.N. A-1 and A-2, Cam Lock and other Mountings. Special Mountings can be designed to your specifications.

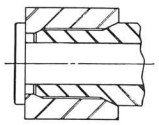


Model	A	B	C	H	J	K	L	P Hex.	N	Standard Sleeve			Flush Sleeve		
										No.	Range	Length	No.	Range	Length
3A	2 23/64″	7/8″	11/64″	1/2″	3/4″	1/2″	7/16″	7/16″	—	A1	1/2″- 5/8″	7/8″	A2	21/32″- 7/8″	1 1/32″
2C	3″	1 1/16″	3/8″	1/2″	15/16″	1/2″	7/16″	17/32″	—	C1	5/8″- 7/8″	1 1/16″	C2	7/8″-1 1/8″	1 1/4″
1C	3 23/32″	1 1/4″	1/2″	3/4″	1 1/8″	1/2″	7/16″	3/4″	—	C1	7/8″-1 1/8″	1 1/4″	C2	1 1/8″-1 9/16″	1 7/16″
18C	4 3/4″	1 1/2″	39/64″	1 1/2″	1 3/4″	3/4″	5/8″	15/16″	—	C1	1 1/8″-1 5/8″	1 1/2″	C2	1 9/16″-2″	1 3/4″
4C	5 1/4″	1 11/16″	1/2″	1 1/2″	2 1/4″	1″	7/8″	1 3/8″	—	C1	1 5/8″-2 1/2″	1 11/16″	C2	2″ -2 7/8″	1 31/32″
5C	5 1/2″	2″	—	1 3/4″	—	1 11/16″	1 17/32″	2 1/8″	2.255″	C1	2 1/2″-3″	2″	C2	2 7/8″-3 1/2″	2 11/32″
6C	5 55/64″	2 1/4″	—	1 3/4″	—	2 1/4″	1 7/8″	2 5/32″	2.798″	C1	3″ -3 1/2″	2 1/4″	C2	3 1/2″-4″	2 23/32″
7C	7″	2 1/2″	—	2 1/8″	—	2 3/4″	1 7/8″	*3 1/2″	3.309″	C1	3 1/2″-5 1/8″	2 1/2″	C2	4″ -5 5/8″	3 3/32″
8C	10 43/64″	3 1/8″	—	3 1/2″	—	4″	3 9/16″	*5 3/4″	4.844″	C1	5 1/8″-7″	3 1/8″	C2	5 5/8″-7″	3 1/2″
9C	11″	4″	—	3 1/2″	—	4 1/2″	3 7/8″	*6 3/4″	6.582″	C1	7″ -10″	4″	—	—	—
10C	14″	6 3/4″	—	4″	—	6 1/4″	5 1/2″	*9 1/2″	9.125″	C1	10″ -14″	6 3/4″	—	—	—
12C	16″	7 3/8″	—	4″	—	6 1/2″	5 3/4″	*12″	11.406″	C1	14″ -18″	7 3/8″	—	—	—

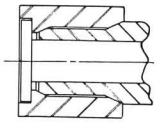
*Round nut with spanner holes. All mandrels are priced less sleeves. "A" and "C" types are NOT interchangeable.
Special sleeves for holding on square, hex, splined or other irregular surfaces available. Prices on application.

SEGMENTED SLEEVE

- Recommended for jobs where tremendous thrust and radial loads are necessary.
- Permits multiple sleeve operation on long bores. Gives greater grip, tends to eliminate wobble and chatter of workpiece.
- Erickson designed segmented sleeves permit the workpiece to be drawn against a locator, or face, if desired, which gives added support and rigidity.
- Segmented sleeves furnished in same models and same dimension as STANDARD or FLUSH TYPE sleeves listed above.



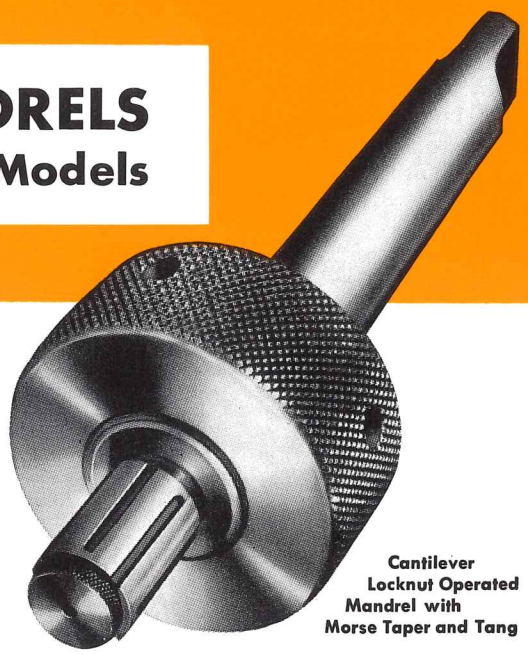
STANDARD TYPE



FLUSH TYPE

Half length series also available. Dimensions and prices on application.

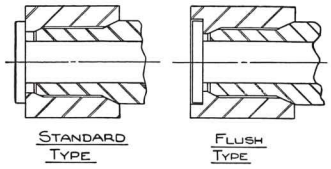
PRECISION EXPANDING MANDRELS
...Drawbar Cantilever Locknut Operated Models

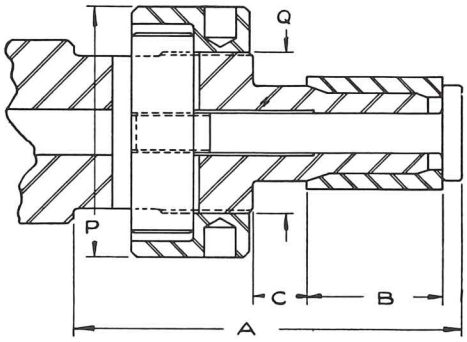


Cantilever Locknut Operated Mandrel with Morse Taper and Tang

- Manual operation by means of knurled locknut.
- Delivers guaranteed accuracy of .0005" T.I.R.
- Sleeves have expansion range of 1/32".
- One mandrel accommodates a wide range of sleeves.
- Greater holding power because the sleeve grips along its entire length.
- Accuracy maintained as mating surfaces wear to a continuous fit.
- Sleeves interchangeable on all types of mandrels of same series.

Cantilever Locknut Operated Mandrels are furnished in all Taper Shanks, Straight Shanks, A.S.S.N. A-1 and A-2, Cam Lock and other Mountings. Special Mountings can be designed to order.



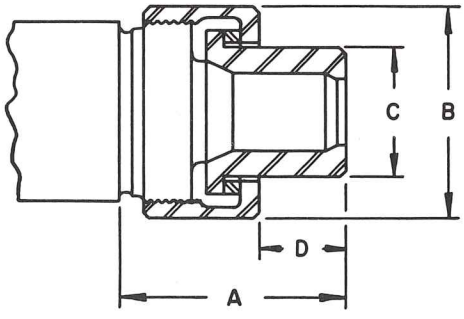


Model	A	B	C	P	Q	Standard Sleeve			Flush Sleeve		
						No.	Range	Length	No.	Range	Length
3A	2 23/64"	7/8"	.164"	1 7/8"	15/16"-24	A1	1/2"- 5/8"	7/8"	A2	21/32"- 7/8"	1 1/32"
2C	2 29/32"	1 1/16"	.380"	2"	1 1/8"-24	C1	5/8"- 7/8"	1 1/16"	C2	7/8"-1 1/8"	1 1/4"
1C	3 43/64"	1 1/4"	.523"	2 3/8"	1 3/8"-24	C1	7/8"-1 1/8"	1 1/4"	C2	1 1/8"-1 9/16"	1 15/32"
18C	4 19/64"	1 1/2"	.607"	2 3/4"	1 3/4"-24	C1	1 1/8"-1 5/8"	1 1/2"	C2	1 9/16"-2"	1 3/4"
4C	5 5/32"	1 11/16"	.968"	3 1/2"	2 1/2"-20	C1	1 5/8"-2 1/2"	1 11/16"	C2	2" -2 7/8"	1 31/32"
5C	5 3/4"	2"	.989"	3 7/8"	2 3/4"-20	C1	2 1/2"-3"	2"	C2	2 7/8"-3 1/2"	2 11/32"
6C	7 1/32"	2 1/4"	1.534"	4 1/8"	3" -20	C1	3" -3 1/2"	2 1/4"	C2	3 1/2"-4"	2 23/32"
7C	7 33/64"	2 1/2"	1.577"	5"	3 3/4"-12	C1	3 1/2"-5 1/8"	2 1/2"	C2	4" -5 5/8"	3 3/32"

A-9 TYPE SLEEVE

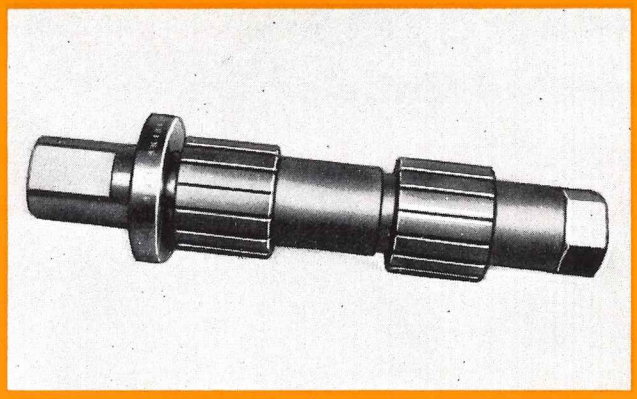
- The A-9 type Erickson sleeve is recommended for use on special holding jobs where it is necessary to grip in small shallow holes.
- Due to the construction of the A-9 sleeve, positive stop location can be furnished.

Model	A	B Hex.	C	D
3A9	1 31/64"	1 3/16"	1/2"- 5/8"	15/32"
2A9	1 11/16"	1 1/2"	5/8"- 7/8"	9/16"
1A9	1 27/32"	1 3/4"	7/8"-1 1/8"	11/16"
18A9	2 5/32"	2 3/8"	1 1/8"-1 5/8"	15/16"
4A9	2 3/4"	3 3/8"	1 5/8"-2 1/2"	1 1/16"

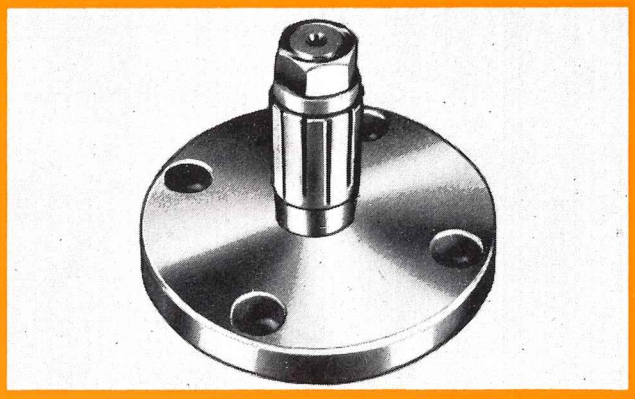


Half length series also available. Dimensions and prices on application.

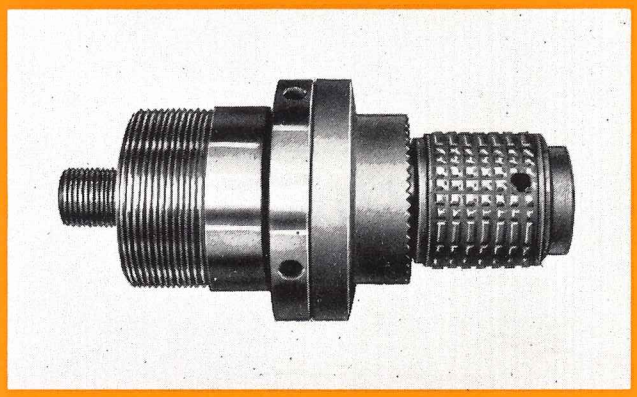
ADDITIONAL ERICKSON



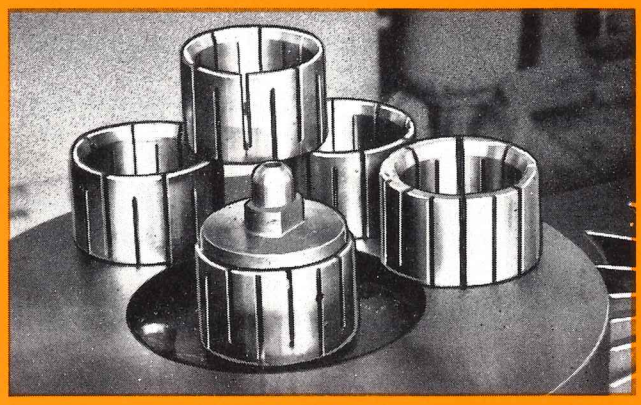
A two sleeve, between centers mandrel



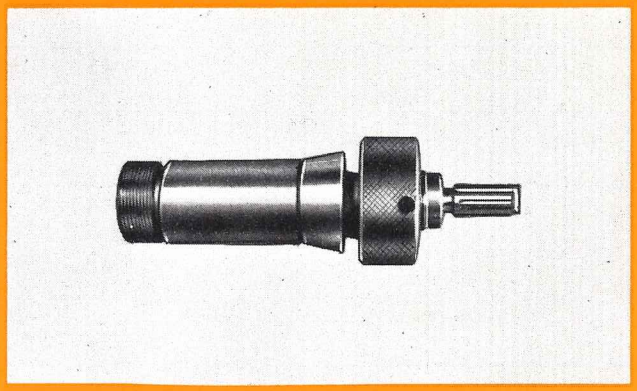
Thread operated face plate mandrel



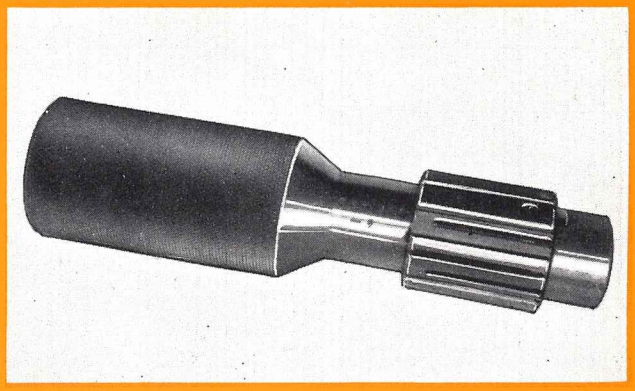
Mandrel with serrated stop and sleeve
for heavy machine cut



Special mandrel fixture

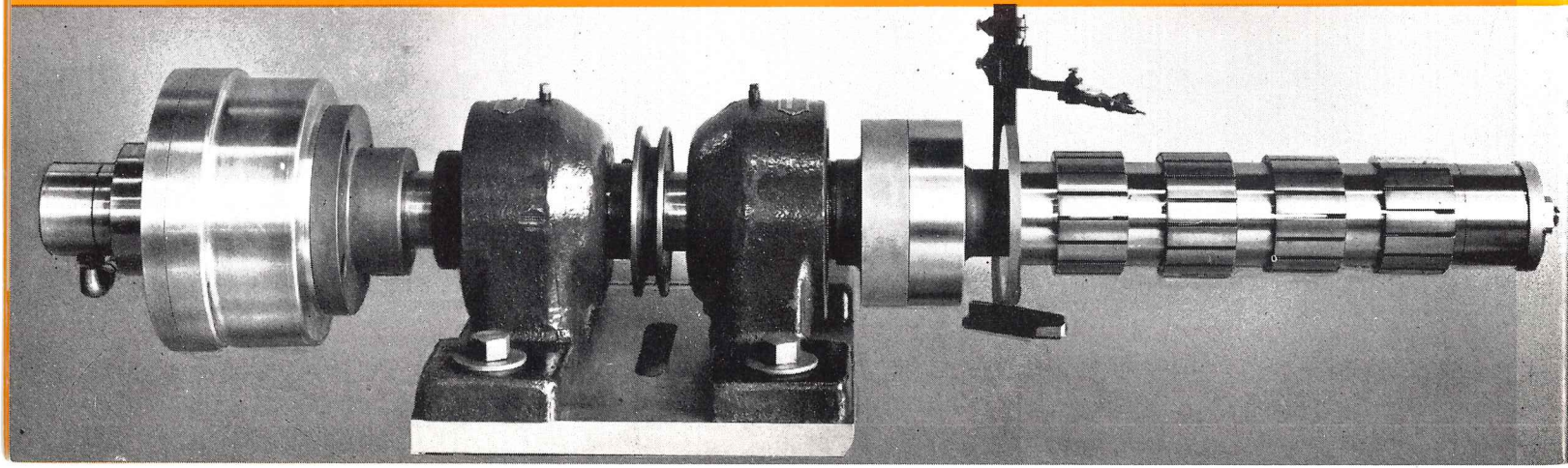


Cantilever locknut mandrel with collet replacement shank

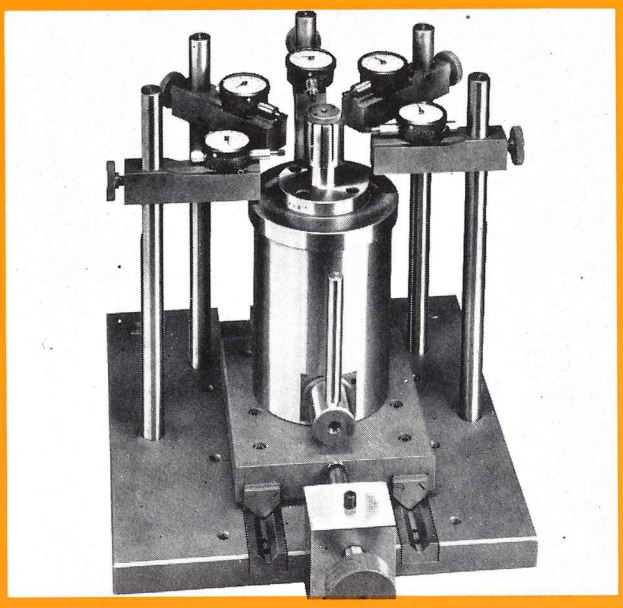


Hand model of thread operated checking fixture

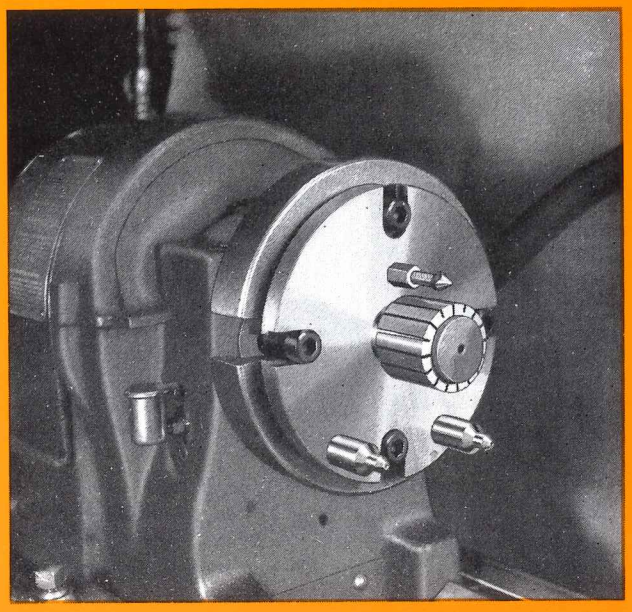
Erickson multiple-sleeve mandrel on checking fixture



MANDREL APPLICATIONS



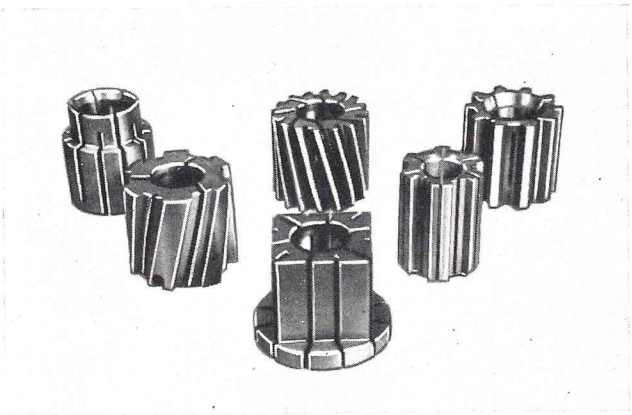
Erickson mandrel on checking fixture

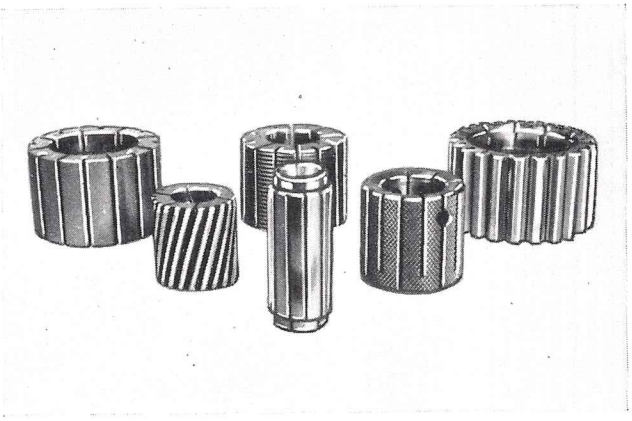


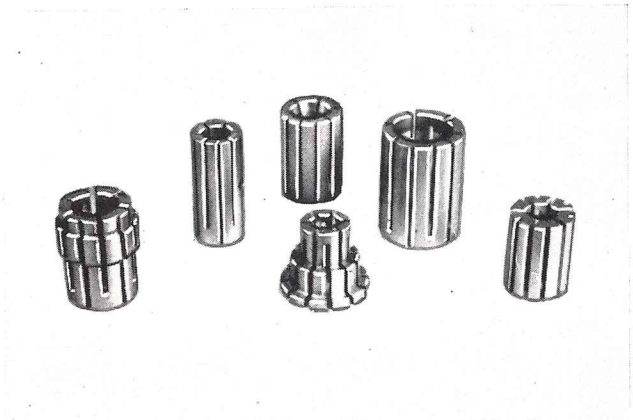
Drawbar mandrel with locator and drive pins

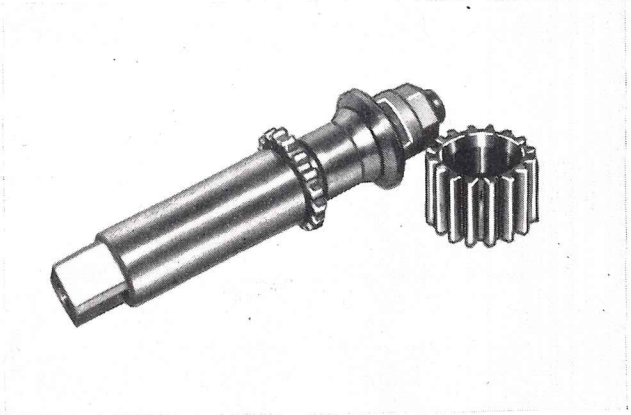
SPECIAL MANDREL SLEEVES

...Designed for holding various internal forms



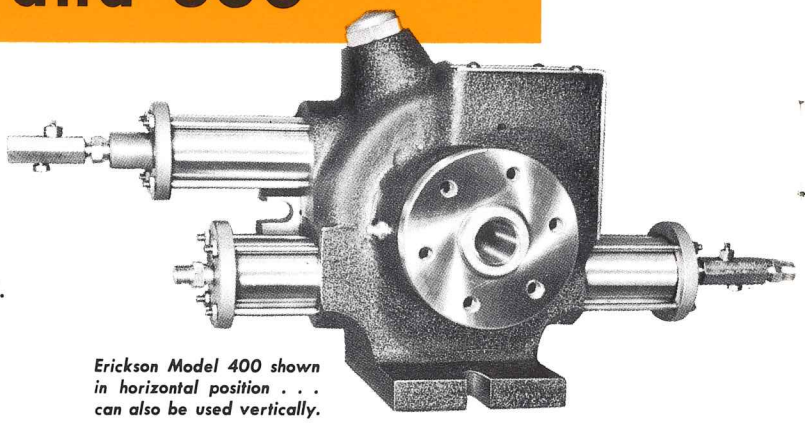






ERICKSON SPEED INDEXERS
...models 400, 450* and 600

- Self contained shock control unit.
- Over-ride eliminated.
- Smoother indexing action.
- Can be used in either vertical or horizontal position.
- Can be operated by either air or hydraulics.
- Standard indexing plate provides 4, 6, 8, 12 and 24 positions.
- Special indexing parts available to provide up to 100 positions on Model 600, 50 on Models 400 and 450.
- Index pin is hardened and ground.
- Base bottoms and sides are machined parallel to spindle.
- Erickson indexers are accurate to extremely close tolerances.
- Guaranteed to index within 2 minutes of a degree.
- Spindle of standard indexer has flange for convenient mounting of work holding fixtures.
- Special fixtures can be designed to meet your specific requirements.

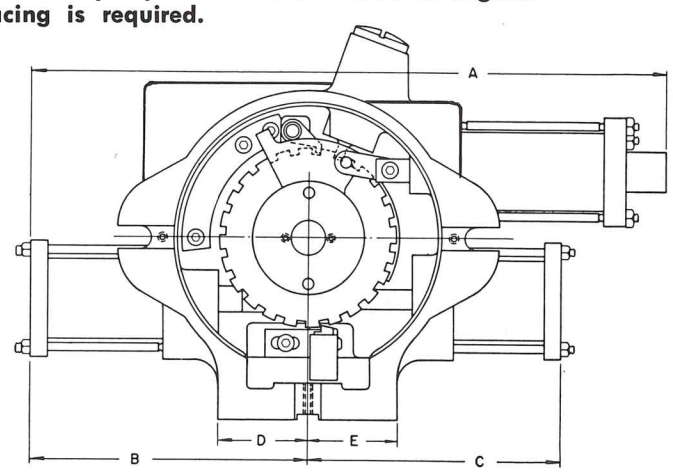


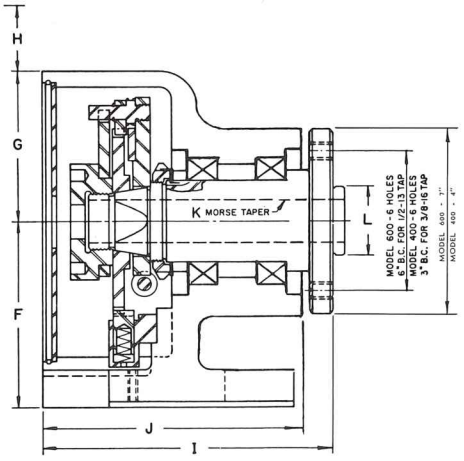
Erickson Model 400 shown in horizontal position . . . can also be used vertically.

RECOMMENDED USE:

Milling • Drilling • Tapping • Spot Welding • Assembly Operations and wherever regular spacing is required.

***Model 450 is "Pancake Type" 4½" high used where limited height is a definite factor. For vertical use only.**





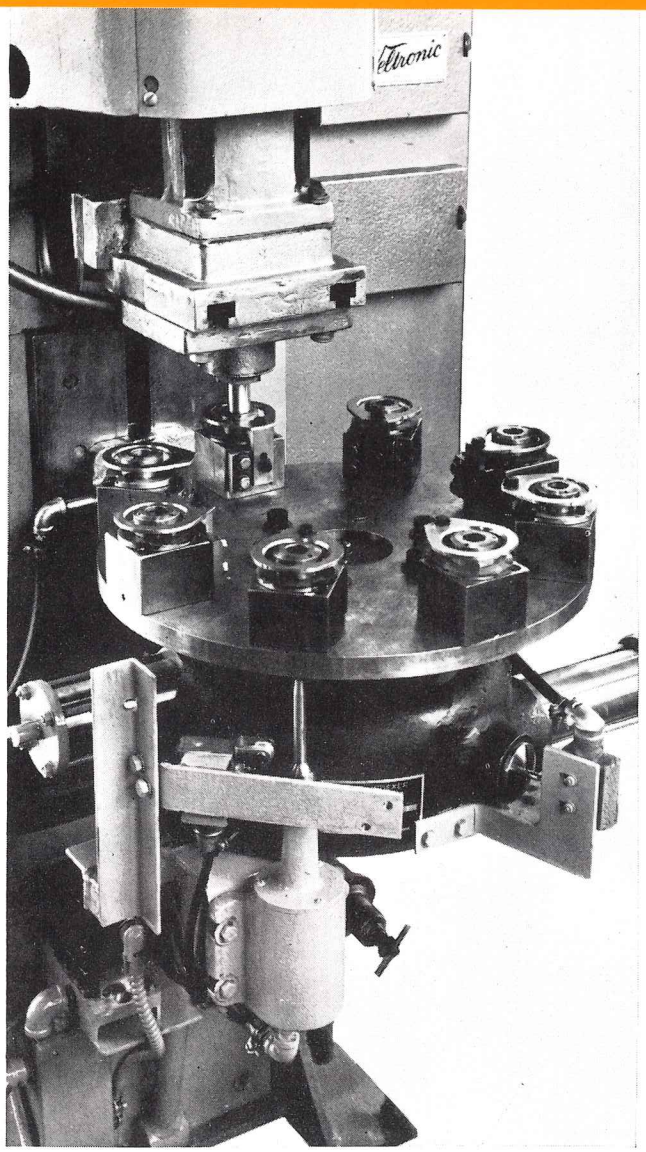
DIMENSIONS													
Model	Weight	A	B	C	D	E	F	G	H	I	J	K	L
400	30	14 3/32"	4 7/8"	5 5/8"	2"	2"	4"	3 1/4"	1 7/16"	6 1/8"	5 5/8"	No. 3	1.4995"
450	39	14 3/32"	6 1/8"	5 5/8"	2"	2"	4"	3 5/8"	1 7/16"	4 1/2"	3 13/16"	.....	.....
600	109	23 7/8"	8 1/8"	9 5/16"	4"	4"	6 1/2"	5 3/4"	1 1/2"	7 7/16"	6 1/2"	No. 6	3.2498"

ALSO AVAILABLE:

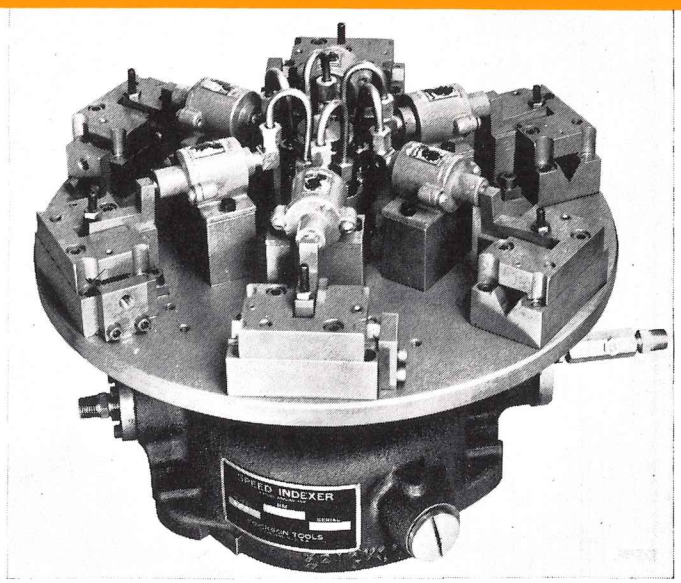
- Standard No. 400 indexer with special spindle incorporating series 400 air chuck.
- Air cylinder is 6½" x 2¼"; overhang is 3¼" from front of indexer housing.
- Standard No. 600 indexer with special spindle incorporating series 600 Erickson air chuck.
- Air cylinder is 9½" x 3½"; overhang is 4¾" from front of indexer housing.

180° and 120° indexing available—Prices on application

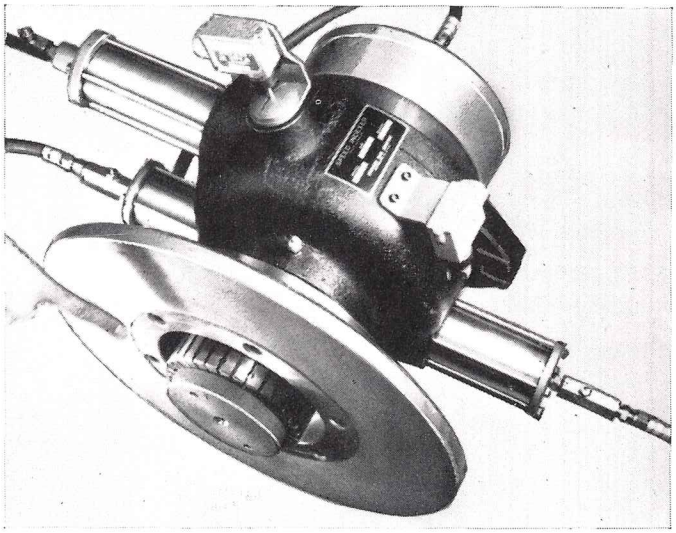
SPEED INDEXER APPLICATIONS



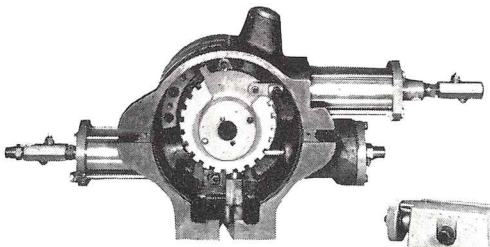
Indexing parts for high production welding operation



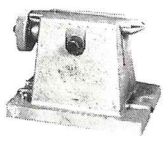
Air operated clamping fixture on dial plate



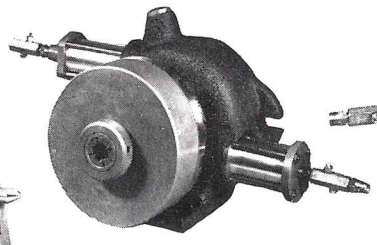
Indexer with expanding mandrel operated by air cylinder



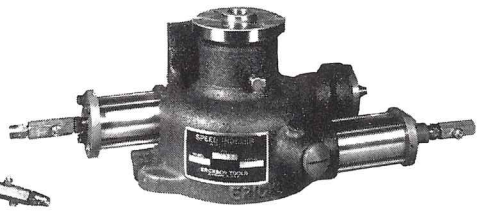
Back view



Tail stock



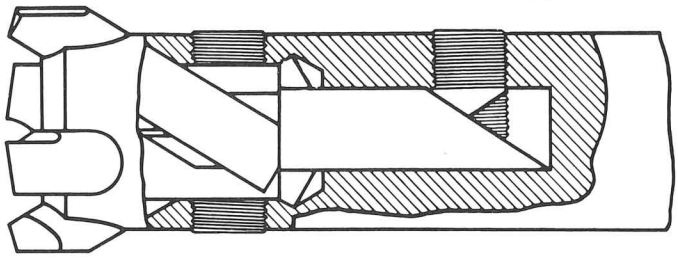
With air chuck



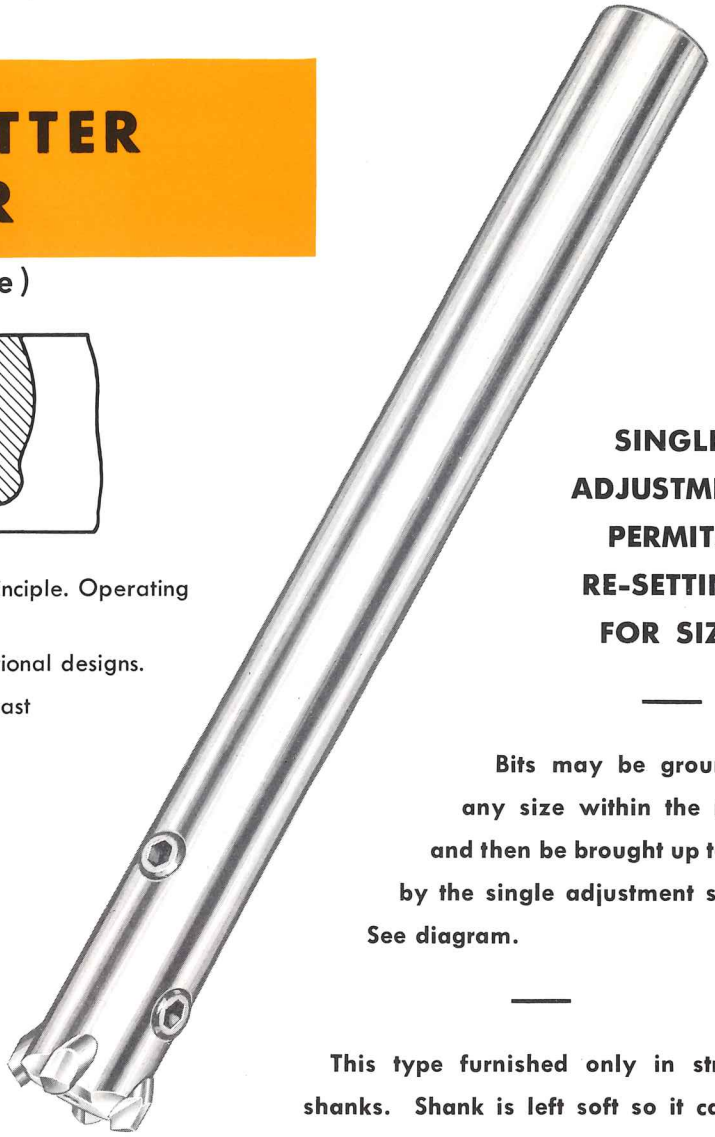
In vertical position

ERICKSON 4 CUTTER BORING BAR

(Single Adjustment Type)



- Greater feeds permitted through use of 4 cutter principle. Operating in same plane.
- Available in wide range of standard sizes plus optional designs.
- Available in high speed steel, carbide tipped, or cast alloy tipped bits.
- Exclusive interlocking principle assures bit rigidity.
- Easy, inexpensive tool bit replacement.
- Adaptable to special cutter grinds for blind or through holes.
- Close, fine thread adjustment—accessibility assures quick, easy adjustment.
- Long tool life—expansion range allows for many regrinds in each set of replacement bits.
- Permits full depth boring in blind holes.
- Straightens out faulty cores.



Model	Minimum Cutting Diameter	Bar Diameter	Overall Bar Length	Bit Diameter
11-PP 12-PP	1 1/16" 1 1/4"	7/8" 1"	9"	9/32"
21-PP 22-PP 23-PP	1 7/16" 1 9/16" 1 11/16"	1 1/8" 1 1/4" 1 3/8"	10"	3/8"
31-PP 32-PP 33-PP	1 7/8" 2" 2 1/8"	1 1/2" 1 5/8" 1 3/4"	12"	1/2"
41-PP 42-PP 43-PP	2 3/8" 2 5/8" 2 7/8"	2" 2 1/4" 2 1/2"	14"	5/8"
51-PP 52-PP 53-PP	3 1/8" 3 3/8" 3 5/8"	2 3/4" 3" 3 1/4"	16"	3/4"
61-PP 62-PP 63-PP	4 1/8" 4 3/8" 4 5/8"	3 1/2" 3 3/4" 4"	20"	7/8"

SINGLE ADJUSTMENT PERMITS RE-SETTING FOR SIZE

Bits may be ground to any size within the range and then be brought up to size by the single adjustment screw. See diagram.

This type furnished only in straight shanks. Shank is left soft so it can be machined, if desired.

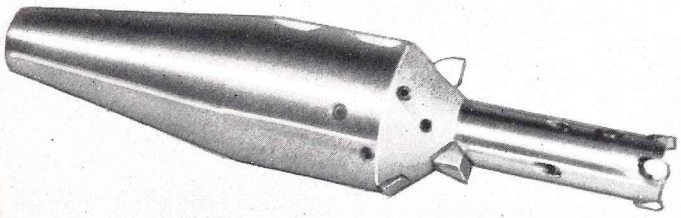
RECOMMENDED USE:

Turret Lathes, Automatics, Boring Mills, etc.

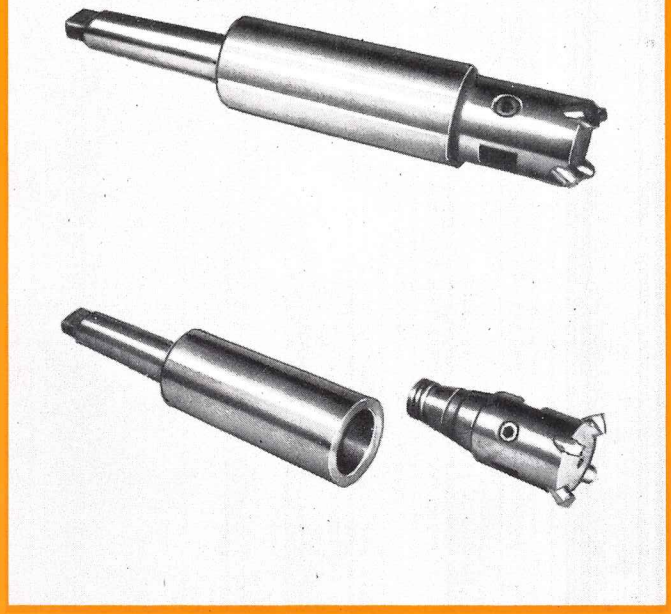
When ordering, please specify whether Single Adjustment or Individual Adjustment is desired. **(See following page.)**

Special shanks and other special features may be furnished. Prices on Application.

Applications of Erickson 4 Cutter Boring Bar



Special boring bar with facing and chamfering bits



Erickson boring bar with interchangeable head

ERICKSON 4 CUTTER BORING BAR

(Individual Adjustment Type)

This type furnished in Straight Shank or Standard Morse Tapers. Special features can be quoted on request.

Individual Adjustment Screw behind each bit.

Model No.	DIMENSIONS				
	Minimum Cutting Diameter	Bar Diameter	Overall Bar Length	Morse Taper No.	Bit Diameter
01 02	7/8" 15/16"	3/4" 13/16"	7"	3	1/4"
11 12	1 1/16" 1 1/4"	7/8" 1"	9"	3	9/32"
21 22 23	1 7/16" 1 9/16" 1 11/16"	1 1/8" 1 1/4" 1 3/8"	10"	4	3/8"
31 32 33	1 7/8" 2" 2 1/8"	1 1/2" 1 5/8" 1 3/4"	12"	4	1/2"
41 42 43	2 3/8" 2 5/8" 2 7/8"	2" 2 1/4" 2 1/2"	14"	5	5/8"
51 52 53	3 1/8" 3 3/8" 3 5/8"	2 3/4" 3" 3 1/4"	16"	5	3/4"
61 62 63	4 1/8" 4 3/8" 4 5/8"	3 1/2" 3 3/4" 4"	20"	6	7/8"

MACHINING HINTS

DRILLING HINTS

Alignment — Make certain that the drill is ground correctly and that the spindle and drill holder are in alignment. This allows the drill to cut on **both** cutting lips . . . resulting in longer tool life and permitting increased feeds. We recommend Erickson Collet Chucks because their greater accuracy allows the drill to cut equally on both lips, thus increasing production.

Cutting Edges — The two cutting edges of a drill must be ground to the same angle and length to get maximum efficiency and full life.

Clearance — The heel of the drill—that part back of each cutting edge — must be properly relieved; this clearance usually ranges from 12° to 15°.

Speed and Feeds — Many factors influence the speed and feed to be used so that no fixed rule can be stated. Assuming that the drill is properly ground and chucked, maximum speeds and feeds can only be used if the drill is held in alignment. Erickson design provides firm grip and accurate alignment of the drill, even when holding on the flutes of the drill.

The Table Below Lists Average Speeds and Feeds Recommended by Drill Manufacturers.

Material	Speed (F.P.M.)	Material	Speed (F.P.M.)
Aluminum	250	Tool steel	60
Brass	200	Steel forging	60
Cast iron (soft)	120	Monel metal	50
Soft steel	110	Stainless steel	30
Cast iron (hard)	80	Chilled cast iron	20

Drill Size	Feed per Revolution in Inches
Up to ¼"	.001" to .0045"
¼" to ½"	.0045" to .010"
Over ½"	.010" to .020"

REAMING HINTS

Alignment — In the ideal reaming job, the spindle, reamer and hole to be machined are all in perfect alignment. This allows the reamer to cut evenly on all of its flutes, increasing reamer life and producing a better finished hole. We feel that the Erickson Floating Holders are the correct answer to the common problem of reamer alignment.

Reaming Speeds — Speeds for machine reaming may vary considerably, depending on the material to be reamed, type of machine, required finish and **accuracy**. In general, most machine reaming is done at about ⅔ the speed used for drilling the same material.

Reaming Feeds — Feeds for reaming are usually much higher than those used for drilling, often running 200 to 300% of drill feeds. Too low a feed may result in excessive reamer wear. Feed must be high enough to allow reamer to cut instead of rub or burnish. Too high a feed may reduce **accuracy** and may lower quality of finish. Use as high a feed as possible that will still produce the required finish and accuracy.

Stock to be Removed — Insufficient stock for reaming may result in burnishing, rather than cutting. It is difficult to generalize on this phase of the work as it depends on material, feed, finish required, depth of hole, and chip capacity of the reamer. For machine reamings allow .010" on a ¼" hole; .015" on a ½" hole; up to .025" on a 1–1½" hole. For hand reaming, stock allowances are much smaller. A common allowance is .001" to .003".

Chatter — The presence of reamer chatter has an adverse effect on reamer life and on the finish in the hole. Chatter may be caused by any one of many reasons — some of which are listed below:

1. Excessive speed.
2. Too much clearance on reamer.
3. Lack of rigidity in job or machine.
4. Insecure holding of work.
5. Excessive overhang.
6. Excessive looseness in holder.
7. Too light a feed.

Reamer Regrinding — In obtaining maximum economy from reamers, the same principles apply as in the case of most other cutting tools. One of the first principles is not to allow a tool to become too dull. The best practice is to regrind the chamfer on a reamer long before it exhibits excessive wear or refuses to cut. This sharpening is usually restricted to the entering taper or chamfer and can be done on any tool and cutter grinder. Care must be taken so that each flute is ground exactly even or the tool is apt to cut oversize.

Sharpening the chamfer on a reamer by hand is not recommended as it is practically impossible to keep the cutting edges even.

In grinding down a reamer to special size, it is usually necessary to relieve or clear the lands. No hard or fast rule may be given as to the amount of this clearance but the following table may be of help:

Size of Reamer	Circular Land Width	Primary Clearance
¼"	.007"	14°
½"	.009"	11°
1"	.013"	9°
1½"	.016"	7°
2"	.023"	7°

TAPPING HINTS

Alignment — As in drilling and reaming, alignment in tapping is also of prime importance. If the spindle, tap holder, tap, and workpiece are in perfect alignment, the tap is allowed to cut evenly on all edges — increasing production, reducing the time per piece, increasing tool life, as well as giving a much better tapped hole. Erickson again has the answer in the complete line of tap holders shown on Pages 14 through 17.

Check Tap for — Proper type, hardness, amount of hook, chamfer, proper land, amount of relief, a chamfer as long as possible, free cutting flute depth to provide chip room, correct tolerance.

Check Work for — Size of hole, roundness of hole, **tap entering hole straight**, chip clearance (if a blind hole), tap hitting bottom (in a blind hole), sand in hole (if cast), work hardening of wall by dull drill or punch, hardness of material.

Check Lubricant for — Proper type, sufficient flow to flood hole, cleanliness, temperature, sufficient lubricant force to wash away chips, lubricant reaching working thread.

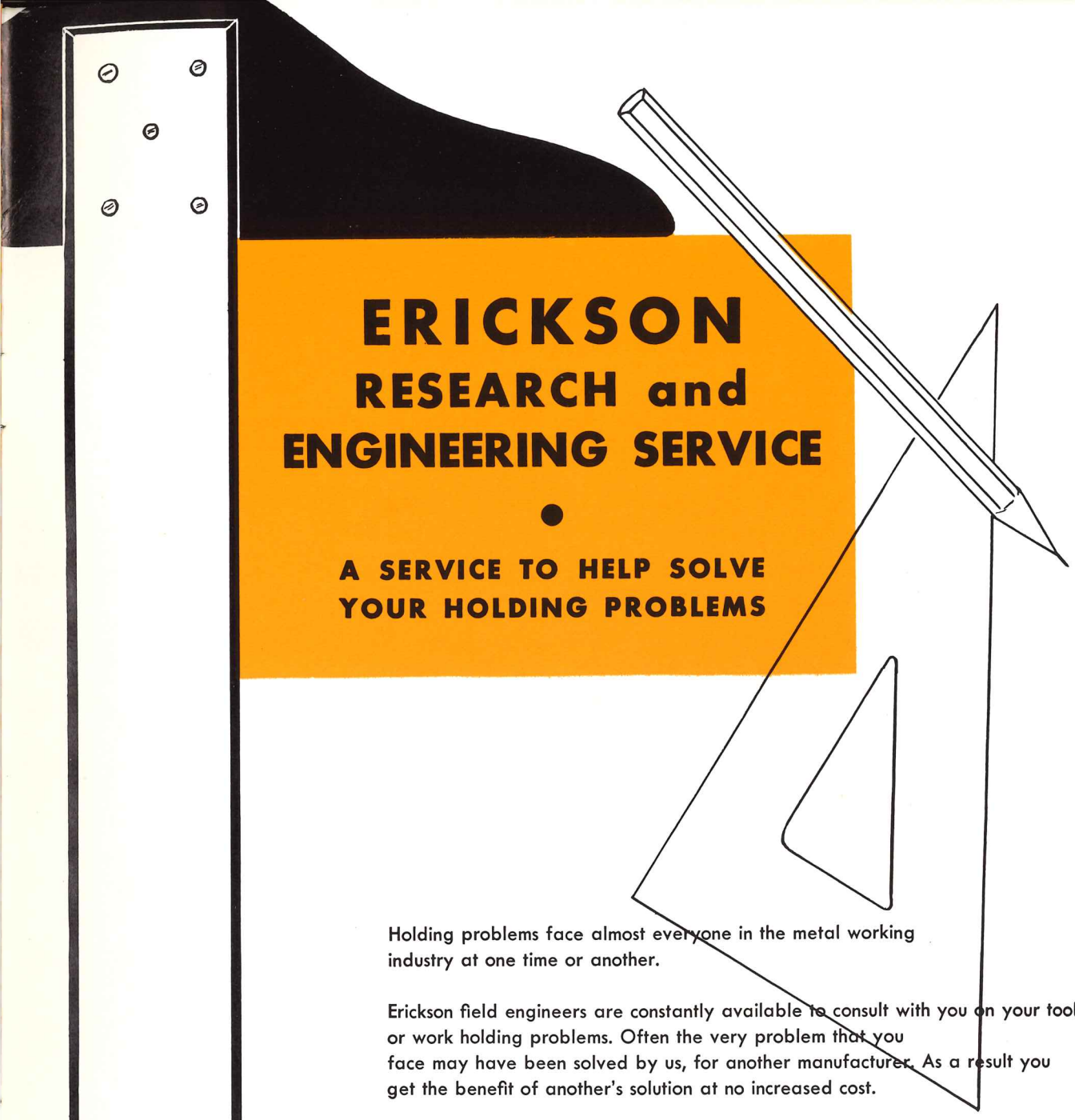
Speeds — As the length of the thread to be cut increases, spindle speeds should be decreased proportionately in order to minimize the amount of heat generated. Spindle speeds are determined by: carbon content of steel, depth of hole to be tapped, type of tap used, manner in which it is ground, and the lubricant used.

Material	Speed (F.P.M.)	Material	Speed (F.P.M.)
Low carbon steel	40-55	Aluminum	80-100
High carbon steel	20-40	Cast iron	60- 70
Chromium steel	30-45	Malleable iron	35- 55
Chrom. nickel steel	15-20	Brass	90-100
Stainless steel	15-20	Bronze	20- 40
Molybdenum steel	20-30	Copper	80-100

Suggested Coolants and Lubricants for Production Tapping:

The recommendations tabulated below are a few of the fluids that have proved most effective:

Material	Lubricant
Aluminum	Kerosene and paraffin (50-50 mixture)
Brass	Soluble oil
Copper	Skimmed milk
Nickel	Sulphurized oil and kerosene
Cast iron	Soluble oil or dry
Malleable iron	Soluble oil
Steel (all grades, all carbon contents)	Sulphur base oil



ERICKSON
RESEARCH and ENGINEERING SERVICE

●

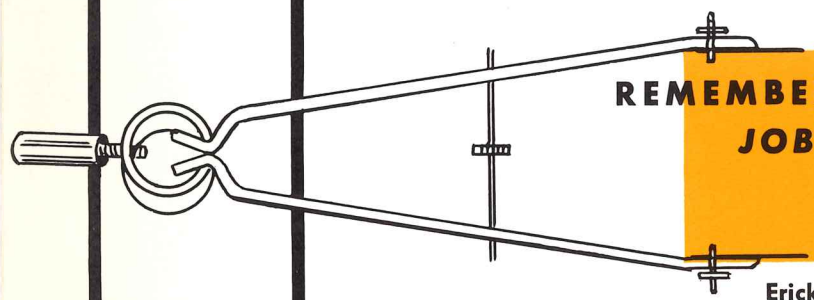
A SERVICE TO HELP SOLVE YOUR HOLDING PROBLEMS

Holding problems face almost everyone in the metal working industry at one time or another.

Erickson field engineers are constantly available to consult with you on your tool or work holding problems. Often the very problem that you face may have been solved by us, for another manufacturer. As a result you get the benefit of another's solution at no increased cost.

Throughout this catalog you have seen instances where the efficiency of the Erickson engineering service has solved difficult problems facing other manufacturers. We shall be glad to apply these experiences to your case and develop whatever new data may be needed.

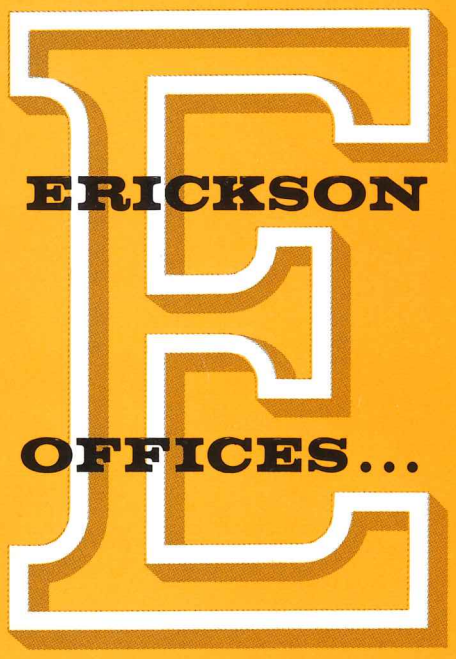
Erickson tools are protected by patents: 2436848, 2465836, 2383036, 2600960, 2358299, 2515183, 2358300, 2228685, 2462155, 2465837, 2570752, 2547518, 442242, 432477, 432419, 436630, 667001, 582066, 623541, 583959, 676901, and patents pending.



REMEMBER: *MANY SPECIAL HOLDING JOBS ARE STANDARD WITH . . .*

ERICKSON

Erickson Tools can be adapted to solve your holding problems



CATALOG K • 5th printing

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NEW ENGLAND DIVISION
55 Millbrook St., Worcester 5, Massachusetts

CENTRAL STATES DIVISION
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MID-ATLANTIC DIVISION
76 Rittenhouse Place, Ardmore, Pennsylvania

MIDWEST DIVISION
6015 N. Cicero Avenue, Chicago 30, Illinois

CENTRAL DIVISION
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Form No. 258

Printed in U. S. A.

ERICKSON TOOL COMPANY

PRICE LIST (Catalog K)

Effective April 1, 1954

5th PRINTING

COLLET CHUCKS model '01 — Page 3

MORSE TAPER AND TANG

Model No.	1	2	3	4	5
301-IR	$10.00	$10.00	.....	.....	.....
201	11.00	11.00	$14.50	.....	.....
101	.....	13.50	15.50	$18.50	.....
181	.....	21.00	22.00	26.50	.....
401	.....	.....	50.00	55.00	$60.00

BROWN & SHARPE—drawbar thread

Model No.	5	7
301-IR	$11.00	$12.00
201	.....	14.50

JACOBS INTERNAL TAPER

Model No.	0	1	2	33
301-IR	$14.00	$11.00	$11.00	.....
201	.....	.....	15.50	$15.50
101	.....	.....	16.50	16.50

STRAIGHT SHANKS

Dimensions		Model No.					
Diam.	Lgth.	301-IR	201	101	181	401	501
5/8"	x 1 1/4"	.....	$15.00	.....	.....	.....	.....
5/8"	x 1 3/4"	$12.50	.....	.....	.....	.....	.....
3/4"	x 2"	15.00	.....	.....	.....	.....	.....
1 1/2"	x 4"	.....	22.00	.....	.....	.....	.....
1 1/2"	x 6"	.....	.....	.....	$35.00	.....	.....
2"	x 4"	.....	.....	$25.00	.....	.....	.....
2"	x 6"	.....	.....	.....	37.50	$52.50	.....
2"	x 8"	.....	.....	.....	.....	.....	$95.00
2 1/2"	x 8"	.....	.....	.....	.....	.....	90.00
3"	x 8"	.....	.....	.....	.....	.....	85.00

COLLET CHUCKS model '09 — Pages 5-6

MORSE TAPER AND TANG

Model No.	1	2	3	4	5
309	$10.00	$10.00	.....	.....	.....
209	11.00	11.00	$14.50	.....	.....
109	.....	13.50	15.50	$18.50	.....
189	.....	21.00	22.00	26.50	.....
409	.....	.....	50.00	55.00	$60.00

BROWN & SHARPE—drawbar thread

Model No.	5	7	9-10	11
309	$11.00	$12.00	.....	.....
209	.....	14.50	$17.50	.....
109	.....	16.50	18.50	$22.00
189	.....	25.00	30.00	35.00
409	.....	.....	50.00	55.00
509	.....	.....	.....	88.00
609	.....	.....	.....	123.00

COLLET CHUCKS model '09 (continued)

JACOBS INTERNAL TAPER

Model No.	1	2	33
309	$11.00	$11.00	.....
209	.....	15.50	$15.50
109	.....	16.50	16.50
189	.....	.....	28.00

STRAIGHT SHANKS

Dimensions		Model No.						
Diam.	Lgth.	209	109	189	409	509	609	709
5/8"	x 3"	$11.50	....	....	....	....	....	.....
3/4"	x 4"	12.50	....	....	....	....	....	....
1"	x 3"	13.50	....	....	....	....	....	....
1 1/4"	x 4"	14.50	$14.50	....	....	....	....	....
1 1/4"	x 6"	....	....	$22.00	$38.50	....	....	....
1 1/2"	x 4"	15.50	....	....	....	....	....	....
1 1/2"	x 6"	....	17.50	23.00	37.50	....	....	....
1 3/4"	x 4"	18.00	....	....	....	....	....	....
1 3/4"	x 6"	....	21.50	27.00	40.00	....	....	....
1 3/4"	x 8"	....	....	....	....	$70.00	....	....
2"	x 6"	....	....	30.00	44.00	....	....	....
2"	x 8"	....	....	....	....	70.00	....	....
2 1/2"	x 8"	....	....	....	....	72.00	....	....
3"	x 6"	....	....	38.00	....	....	....	....
3"	x 8"	....	....	....	55.00	80.00	$95.00	$200.00

AUTOMOTIVE SHANKS

Model No.	309	209	109	189	409
1/2-16	$20.00	$20.00	.....	.....	.....
5/8-16	25.00	25.00	.....	.....	.....
3/4-16	18.00	18.00	$20.00	.....	.....
7/8-12	25.00	25.00	25.00	.....	.....
1 -12	25.00	25.00	25.00	$34.00	.....
1 1/16-12	20.00	20.00	20.00	29.00	.....
1 1/4-12	.....	.....	25.00	29.00	.....
1 3/8-12	.....	.....	22.00	32.00	$43.00
1 7/8-12	.....	.....	.....	.....	45.00

FACE PLATE CHUCKS — Page 7

Model No.	'09	Model No.	'01*
309	$ 35.00	301-IR	$35.00
209	25.00	201	30.00
109	26.00	101	31.00
189	36.00	181	41.00
409	60.00	401	65.00
509	96.00	501	110.00
609	140.00	601	185.00
709	258.00		
809	330.00		
909	540.00		

*NOTE: Dimensional data given in catalog page 7 is for '09 models only.

All prices F.O.B. our plant, Cleveland, Ohio. Prices subject to change without notice.

ALL CHUCKS PRICED LESS COLLETS

MILLING MACHINE CHUCKS model '09 — Page 8

MILLING MACHINE STANDARD TAPERS

Model No.	20	30	40	50
209	$46.25	$51.50	.....	.....
109	46.25	51.50	$64.25	.....
189	.....	62.50	75.50	.....
409	.....	74.50	86.50	$100.75

COLLET CHUCKS model '03 — Page 9

Prices on application.

ERICKSON COLLETS — Page 10

(Interchangeable in all chucks of same series.)

Model No.	Sizes	Price Each
300	3/64"	$7.50
	5/64" and 3/32"	5.10
	1/8" to 1/4"	4.20
200	1/8" to 3/8"	4.20
100	1/4" to 9/16"	4.50
180	1/4" to 3/4"	6.00
400	1/2" to 1"	12.00
special	1/8" to 15/32"	17.50
500	1" to 1 5/8"	18.00
special	1/2" to 31/32"	23.00
special	1/4" to 15/32"	28.00
600	1 1/2" to 2 1/8"	30.00
special	1" to 1 15/32"	35.00
special	1/2" to 31/32"	40.00
700	2" to 2 5/8"	60.00
800	2 1/2" to 4"	85.00
900	3 7/8" to 5 3/4"	125.00

ADJUSTABLE FLANGE TYPE HOLDERS (B & S type) — Page 12

Shank	329	229	129
5/8" x 1 1/8"	$18.50	.....	.....
3/4" x 2"	18.50	$18.50	.....
1" x 1 3/4"	.....	.....	$29.00

FULL FLOATING HOLDERS — Pages 13-14

COLLET TYPE

Shank	209	109	189	409	509
1" x 3"	$38.50	$38.50	$47.00	.....	.....
1 1/2" x 4"	40.00	40.00	49.50	$72.50	$101.00
2" x 6"	42.00	42.00	51.50	72.50	101.00
Morse tapers, 2 and 3	44.00	44.00	.....	.....	.....
Morse tapers, 4	.....	.....	56.50	77.00	109.00

BUSHING TYPE

Shank	209	109	189	409	509
1" x 3"	$31.00	$31.00	$40.00	.....	.....
1 1/2" x 4"	32.00	32.00	41.50	$58.00	$80.00
2" x 6"	33.50	33.50	43.00	58.00	80.00
Morse tapers, 2 and 3	34.50	34.50	.....	.....	.....
Morse tapers, 4	.....	.....	46.00	60.50	83.50

Please specify use, whether horizontal or vertical, revolving or stationary.

TAP CHUCKS model '01 — Page 15

Model	Morse Taper	Price	Collets	Drivers
Z01	2	$24.50	$ 5.50	$2.00
W01	2	27.50	6.50	2.25
U01	4	51.50	11.50	3.75
S01	4	65.50	12.50	3.75

TAP CHUCKS model '09 (with compensating driver) — Page 16

Model No.	Morse Taper	Price	Collets
E09	2	$39.50	$ 5.50
F09	2	42.50	6.50
G09	4	66.50	15.50

TAP HOLDERS — Page 17

RELEASING FULL FLOATING

Dimensions	Model No. E09	Model No. F09	Model No. G09
1" x 4"	$99.00	$123.00	.....
1 1/2" x 5"	99.00	123.00	$137.00
2 1/2" x 6"	.....	129.00	143.00
3" x 8"	.....	.....	149.00

RELEASING TAP HOLDERS with adjusting flanges

Dimensions	Model No. E09	Model No. F09	Model No. G09
1" x 4"	$84.00	$ 98.00	.....
1 1/2" x 5"	84.00	98.00	$112.00
2 1/2" x 6"	.....	104.00	118.00
3" x 8"	.....	.....	124.00

TAP HOLDERS — Page 18

RELEASING TAP HOLDER (no flanges)

Dimensions	Model No. E09	Model No. F09	Model No. G09
1" x 4"	$76.00	$90.00	.....
1 1/2" x 5"	76.00	90.00	$104.00
2 1/2" x 6"	.....	96.00	110.00
3" x 8"	.....	.....	116.00

TAP HOLDERS

FULL FLOATING TAP HOLDER with compensating driver

Dimensions	Model No. E09	Model No. F09	Model No. G09
1" x 3"	$58.50	$67.00	.....
1 1/2" x 4"	60.00	69.50	$121.00
2" x 6"	62.00	71.50	121.00

Other shanks — prices on application. All prices subject to change without notice.

ALL CHUCKS PRICED LESS COLLETS

AIR OPERATED CHUCKS

Page 19

Mountings	Models						
	'01AT				'09AT		
	401AT	401ATHD	501AT	601AT	409AT	509AT	609AT
Plain face plate	$165.00	$214.00	$244.00	$304.00	$264.00	$300.00	$348.00
4″ A.S.S.N. A1-2	195.00	244.00	.....	.....	300.00	.....	.....
5″ A.S.S.N. A1-2	195.00	244.00	274.00	.....	300.00	336.00	.....
6″ A.S.S.N. A1-2	195.00	244.00	274.00	334.00	300.00	336.00	384.00
8″ A.S.S.N. A1-2	222.00	270.00	300.00	360.00	326.00	362.00	410.00
4″ A.S.S.N. D1	232.00	280.00	.....	.....	336.00	.....	.....
6″ A.S.S.N. D1	244.00	292.00	322.00	382.00	348.00	384.00	432.00
8″ A.S.S.N. D1	262.00	310.00	340.00	400.00	366.00	402.00	450.00

All prices listed above are less *valve* and fittings, collets. Other mountings — Prices on application.
Regulator, oiler, and filter unit — $30.50. 3-way hand or foot valve, hose and fittings — $16.50.

AIR CYLINDERS

Prices on application.

Page 20

AIR OPERATED CHUCKS—R TYPE

Prices on application.

Page 21

EXPANDING MANDRELS—Drawbar Operated

Page 23

DIMENSIONS AND PRICES (Drawbar Models)

Draw-bar Mod.	Morse Tapers				B & S Tapers			Face Plates		Sleeve Prices							
										Standard Type				Flush Type			
	2	3	4	5	7	8-9	10-11	Std. Dia.	Price	C1	Range	Lgth.	Price	C2	Range	Lgth.	Price
3A	$44.50	$44.50	$48.00	$55.00	$44.50	$45.50	$48.00	4″	$62.50	A1	½″- 5/8″	7/8″	$12.00	A2	21/32″- 7/8″	1 1/32″	$18.00
2C	39.50	39.50	43.00	51.00	39.50	41.00	43.00	5″	57.50	C1	5/8″- 7/8″	1 1/16″	12.00	C2	7/8″-1 1/8″	1 1/4″	18.00
1C	39.50	39.50	43.00	51.00	39.50	41.00	43.00	5″	57.50	C1	7/8″-1 1/8″	1 1/4″	12.00	C2	1 1/8″-1 9/16″	1 15/32″	18.00
18C	53.00	53.00	56.50	62.50	....	53.00	56.50	5″	73.50	C1	1 1/8″-1 5/8″	1 1/2″	18.00	C2	1 9/16″-2″	1 3/4″	24.00
4C	....	79.00	83.00	89.00	....	79.00	83.00	6″	101.00	C1	1 5/8″-2 1/2″	1 11/16″	24.00	C2	2″ -2 7/8″	1 31/32″	30.00
5C	....	....	110.00	116.00	....	....	116.00	6″	134.00	C1	2 1/2″-3″	2″	48.00	C2	2 7/8″-3 1/2″	2 11/32″	54.00
6C	....	....	....	192.00	....	....	.....	7 1/2″	210.00	C1	3″ -3 1/2″	2 1/4″	66.00	C2	3 1/2″-4″	2 23/32″	78.00
7C	....	....	....	246.00	....	....	.....	8 1/2″	270.00	C1	3 1/2″-5 1/8″	2 1/2″	102.00	C2	4″ -5 5/8″	3 3/32″	114.00
8C	....	....	....	....	....	....	.....	9″	390.00	C1	5 1/8″-7″	3 1/8″	126.00	C2	5 5/8″-7″	3 29/32″	138.00

EXPANDING MANDRELS—Between Center Models

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Between Center Models	Expanding Mandrel Prices (Less Sleeves)	Sleeve Prices							
		Standard Type				Flush Type			
	Price	C1	Range	Length	Price	C2	Range	Length	Price
3A	$44.50	A1	½″- 5/8″	7/8″	$12.00	A2	21/32″- 7/8″	1 1/32″	$18.00
2C	39.50	C1	5/8″- 7/8″	1 1/16″	12.00	C2	7/8″-1 1/8″	1 1/4″	18.00
1C	39.50	C1	7/8″-1 1/8″	1 1/4″	12.00	C2	1 1/8″-1 9/16″	1 15/32″	18.00
18C	53.00	C1	1 1/8″-1 5/8″	1 1/2″	18.00	C2	1 9/16″-2″	1 3/4″	24.00
4C	79.00	C1	1 5/8″-2 1/2″	1 11/16″	24.00	C2	2″ -2 7/8″	1 31/32″	30.00
5C	110.00	C1	2 1/2″-3″	2″	48.00	C2	2 7/8″-3 1/2″	2 11/32″	54.00
6C	192.00	C1	3″ -3 1/2″	2 1/4″	66.00	C2	3 1/2″-4″	2 23/32″	78.00
7C	246.00	C1	3 1/2″-5 1/8″	2 1/2″	102.00	C2	4″ -5 5/8″	3 3/32″	114.00
8C	354.00	C1	5 1/8″-7″	3 1/8″	126.00	C2	5 5/8″-7″	3 29/32″	138.00

All mandrels are priced less sleeves.

Any type shank or mounting can be furnished between center mandrels. Prices on application. Larger mandrels of above design available. Prices on application. Special sleeves for holding on square, hex, splined or other irregular surfaces available. Prices on application.

EXPANDING MANDRELS—Drawbar Cantilever Locknut Operated Models

Page 26

DIMENSIONS AND PRICES (Cantilever Locknut Models)

Cantilever Locknut Mod.	Morse Tapers (Tang or Drawbar)				B & S Tapers (Tang or Drawbar)			Face Plates		Sleeve Prices							
										Standard Type				Flush Type			
	2	3	4	5	7	8-9	10-11	Std. Dia.	Price	C1	Range	Lgth.	Price	C2	Range	Lgth.	Price
3A	$56.50	$56.50	$60.00	$67.00	$56.50	$57.50	$60.00	4″	$76.50	A1	½″- 5/8″	7/8″	$12.00	A2	21/32″- 7/8″	1 1/32″	$18.00
2C	51.50	51.50	55.00	62.50	51.50	53.00	55.00	5″	69.50	C1	5/8″- 7/8″	1 1/16″	12.00	C2	7/8″-1 1/8″	1 1/4″	18.00
1C	51.50	51.50	55.00	62.50	51.50	53.00	55.00	5″	69.50	C1	7/8″-1 1/8″	1 1/4″	12.00	C2	1 1/8″-1 9/16″	1 15/32″	18.00
18C	65.00	65.00	68.50	76.50	....	65.00	68.50	5″	85.00	C1	1 1/8″-1 5/8″	1 1/2″	18.00	C2	1 9/16″-2″	1 3/4″	24.00
4C	....	101.00	104.50	110.00	....	101.00	104.50	6″	122.50	C1	1 5/8″-2 1/2″	1 11/16″	24.00	C2	2″ -2 7/8″	1 31/32″	30.00
5C	....	....	132.00	138.00	....	.....	138.00	6″	156.00	C1	2 1/2″-3″	2″	48.00	C2	2 7/8″-3 1/2″	2 11/32″	54.00
6C	....	....	....	234.00	....	.....	.....	7 1/2″	252.00	C1	3″ -3 1/2″	2 1/4″	66.00	C2	3 1/2″-4″	2 23/32″	78.00
7C	....	....	....	306.00	....	.....	.....	8 1/2″	330.00	C1	3 1/2″-5 1/8″	2 1/2″	102.00	C2	4″ -5 5/8″	3 3/32″	114.00

All mandrels are priced less sleeves.

Any type shank or mounting can be furnished on cantilever locknut mandrels. Prices on application. Larger mandrels of above design available. Prices on application. Special sleeves for holding on square, hex, splined or other irregular surfaces available. Prices on application.

INDEXER CIRCULAR K 1—PRICE LIST

Effective September 9, 1955

INDEXERS	Model Numbers 450	400	600
Standard Erickson Speed Indexer with Timken Bearings with flanged mounting and 24 position index plate, complete with shock control and flow control valve—less accessories	....	$395.00	$825.00
Erickson Rotary Indexing Table—with 10" dial plate—Timken bearings in spindle—24 position—less accessories	$395.00	....	....
Same as above with special series Air Chuck (less collets)	....	520.00	1075.00
(Add to above prices for 2 limit switches installed)	60.00	60.00	60.00
Standard Tailstock assembly	....	54.00	78.00*
Stop Plate (see note)	....	6.00	9.00
Index Pin Plate (see note)	....	9.00	12.00
Index Plate—24 positions	....	45.00	85.00
Index Plate—4 to 23 positions	....	50.00	95.00
ACCESSORIES REQUIRED FOR AIR OPERATION			
Lubricator, Pressure Regulator and Filter Unit	....	30.50	30.50
4-way Valve, Hose and Fittings	....	20.50	20.50
3-way Valve, Hose and Fittings—for air chuck when used	....	16.50	16.50

NOTE: A special stop plate and index pin plate must be used with other than 24 position plate or used only on special applications. Special parts—prices on application.

*Same as on Model 400—complete with riser blocks.

ERICKSON TOOL COMPANY

BORING BARS (Effective August 1, 1957)

Single Adjustment Type			Individual Adjustment Type					Replacement Bits	
	Straight Shanks			Straight Shanks		M. Taper Shanks		H.S.S.	Carbide-Tip
Model	H.S.S. Bits	Carbide-Tipped	Model No.	H.S.S. Bits	Carbide-Tipped	H.S.S. Bits	Carbide-Tipped	Per Set (4)	Per Set (4)
.....	.....	.....	01	$44.00	$51.50	$48.25	$55.75	$ 7.00	$15.25
.....	.....	.....	02	45.50	53.00	49.75	57.25		
11PP	$47.00	$53.75	11	47.00	53.75	51.25	58.00	8.00	15.25
12PP	47.75	54.50	12	47.75	54.50	52.00	58.75		
21PP	50.75	57.00	21	50.75	57.00	55.50	62.00		
22PP	52.00	58.25	22	52.00	58.25	56.75	63.00	9.75	16.50
23PP	53.50	59.75	23	53.50	59.75	58.25	64.50		
31PP	57.50	63.75	31	57.50	63.75	62.25	68.50		
32PP	59.50	65.75	32	59.50	65.75	64.25	70.50	12.50	19.75
33PP	61.25	67.50	33	61.25	67.50	66.00	72.25		
41PP	75.50	82.00	41	75.50	82.00	81.50	88.00		
42PP	78.00	85.75	42	78.00	85.75	85.00	91.50	19.50	27.00
43PP	82.00	89.75	43	82.00	89.75	89.00	95.50		
51PP	101.00	110.00	51	101.00	110.00	107.00	116.00		
52PP	105.00	114.25	52	105.00	114.25	111.25	119.50	28.00	38.00
53PP	110.00	119.00	53	110.00	119.00	116.00	125.00		
61PP	136.00	145.50	61	136.00	145.50	143.00	153.25		
62PP	144.50	154.00	62	144.50	154.00	151.50	161.75	41.00	51.25
63PP	154.00	163.50	63	154.00	163.50	161.00	171.25		

Prices Subject to Change without Notice.

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